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ASTOUNDING STORIES

JAN
1934

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COLOSSUS

Donald Wandrei

On Sale Third Wednesday of Each Month

VOLUME XII
NUMBER 5

ASTOUNDING STORIES

A STREET & SMITH PUBLICATION

JANUARY
1934

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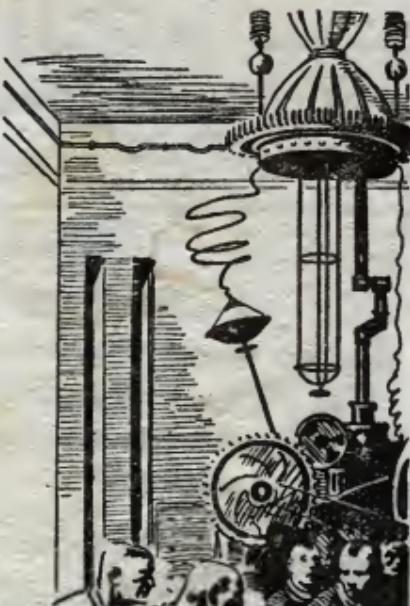
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REDMASK of the

THE CITY-STATE of Yorrick was a huge cube of blackness on the shores of the ocean. On one side stretched the interminable Atlantic, billowing and sun-bright; on the other, the almost as interminable forests of the Outlands. In between lay a sudden cessation of light, of matter itself—a spatial void of smoothly regular outlines.

The oligarchs of Yorrick had builded well to protect themselves and their millions of subjects from outside attack. Against the warped, folded space that inclosed the three levels of the city, powered as it was



With his men
in control, the
tall, masked
figure of the outlaw proudly faced the
old man on the floor.

OUTLANDS

by Nat
Schachner

A New Conception of the World as It Will Be in the Year 5000

by the gravitational-flow machines, the most modern offense was impotent. No weapon conceived by man could break through.

The oligarchs laughed and took their ease in the pleasure palaces on

the top level of the beryllium-steel, quartzite city. The space-warp made an impregnable defense against the assortment of city-states which dotted the American continent. Whatever diverse forms of government they possessed—oligarchic, democratic, dictatorial, communist, socialist, fascist—they achieved paradoxical unity only in a common, mutual, ineradicable hatred. This of course was a heritage from the final break-up that de-



Illustrated by
Paul Orban

stroyed the world state back in 4250 A. D.

Civilization ebbed and flowed for centuries until strong men, and strong groups of men, drew apart into the vast forests that had overlaid the continent, and builded themselves great cities—self-contained, self-powered, self-sufficient

—into which the weaker elements fled for safety. The Outlands were left—gloomy, close-branched depths where the sunlight barely percolated, where wild beasts lurked and wilder men roamed—outlaws.

The oligarchs of Yorricks gave themselves up to every form of luxurious idleness, to sybarite arts and dalliances. Not all of the great families had degenerated, though. The Marches, for instance, from time immemorial held executive power with strong fingers; and Charles of the Marches was the greatest of his line. It was he who had sealed the levels hermetically, and caused emergency power equipment to be moved to the third tier. The technics and scientists of the second level were loyal, no doubt, but it was wise to be secure from all surprises.

The workers of the first level—the sprawling, rabbit-breeding mass of them, who tended the great whirling machines in the tunnels that tapped the sea itself for power—were brutish and submissive enough. But the oligarchs had not forgotten the great uprising of 5310, when the sudden rush of blinking owl-like workers had almost wiped them out.

So Charles sealed them in, and forever cut them off from the outer world. All their simple lives they worked, ate, quarreled, and spawned in artificial light, propping the foundations of the other levels, keeping the space-warp intact, preparing the synthetic food pellets, tending the atomic integrators that built up complex elements and compounds from sea water. Visor-screens raked every nook and cranny of the lower levels—privacy was a thing unknown. Automatic high-pressure chutes kept steady

streams of consumer goods pouring onto the third.

THE THIRD LEVEL was open now to the outer sun. The oligarchs preferred natural sunshine to artificial rays, the fresh winds of heaven to ventilating systems.

There was unusual activity on the broad crystal ramp—movement, color, and bustle. A great ship nestled in the ways, its bright metallic sheath tapering to steel-nosed rapier points. Around it clustered a dozen smaller ships, squat and heavily armored—the battle fleet of Yorricks.

The final group disappeared into the entrance port, the gangplanks rolled up in visibility against the side, the oligarchs in their brightly fashioned garments ebed away, and the slide-ports moved into position.

Communications - Technic, B-54, watched the visor-screen from his cubicle on the second level. A ticker buzzed and Captain Arles, A-6, molded into form on the screen. The captain nodded curtly.

"We are ready. What's the last report from the Outlands?"

B-54 pressed a button. A tel-autograph at his side sprang into a series of dots and dashes. It was connected with the range-viewers that constantly swept the Outlands. B-54 studied the cryptic symbols, turned to the visor-screen. His voice was formal, expressionless.

"Beg to report series of vibrations from Point 6-9-4-3."

The captain's bluff, pock-marked face went grave. "That's on the Pisbor Channel?"

"Yes, sir."

The captain thought rapidly. There was precious freight aboard the *Arethusa*—human, as well as cargo. Of course the convoy was adequate protection, still—

"Contact Pisbor at once," he ordered. "Swing the channel on Route 2. We must take no chances."

"Yes, sir."

B-54's fingers flew. The captain's features faded from the screen; another's took their place. It was the communications-man of Pisbor, blank-faced, almost robotlike.

"Hello, Odo," said B-54. "Last-minute change. Switch contact to Route 2."

"I take no orders from Yorrick," said Odo stolidly.

"You will," B-54 told him. "Your own man, Ambassador Gola, gave the word."

B-54 chuckled at the ludicrous change on the robot features. Panic, haste, fear! It was worth the lie. Odo swung a lever; B-54 pressed a button. The powerful beam-waves bent southward in a huge arc, forming a guarded channel for ship passage along the longer Route 2.

"Contact."

"Contact!"

Odo was gone; instead, the technic saw the cradled field of the *Arethusa* and its convoy. He closed a switch. At once the great vessels lifted up into the sunlit sky, slanting steeply, borne along on the powerful surge of the beam-ray.

A spark of human longing gleamed in B-54's eye. It was penal to keep the screen open longer than duty required. He took a swift glance at the mirrored sky he had never seen in actuality, snuffed at the incredible fragrance that did not exist for him, sighed, and snapped off the screen. As he did so, technic C-31, in a neighboring cubicle, laid down the impregnable ceiling of the space-warp. He, too, had received warning of unusual vibrations in the Outlands.

THE ARETHUSA BOWLED
easily along the invisible channel. At five hundred miles an hour, even by the long way, the ship should not take much more than an hour to reach Pisbor. The battle cruisers surged alongside in close-knit array, hemming her in, protecting her with their heavily armored sides and powerful cosmo-units.

Captain Arles, however, was worried. His blunt, seamed fingers drummed an erratic tattoo on the table before him. The others in the luxuriously equipped lounge looked at him irritably. He was there on sufferance only; a technic seated with presences.

There were four of them: Charles of the Marches, a tall, commanding man, with the arrogance of lineage stamped on his strong curved nose, on his firm molded lips, in the flash of his eye when crossed. Next him was his daughter Janet, a slight wisp in comparison with her father, rather pretty in a weak sort of way.

Across the stellite table, half facing her and half turned to her father, very respectful in his demeanor, yet with a faint sneer on his dark, ugly features, was Gola, personal ambassador from Carlos, and dictator of Pisbor. His mission had been eminently successful, yet he did not seem pleased.

The last man slouched carelessly in his chair, eyes half closed. He was big and blond and his lips were smiling. Yet Comrade Ahrens had suffered failure in his mission. He had been unable to prevent the proposed marriage. The very presence of his companions on the *Arethusa* was positive proof of his failure. He would have to report to his comrades of the Soviet council of Chico, the great communist city-state on the shores of the northern lake, that the marriage was going through.

Janet of the Marches was speeding swiftly to Pisbor, to be united with the elderly Carlos in holy matrimony, thereby uniting two powerful city-states in alliance for the first time in centuries. The delicate balance of power was about to be destroyed, and there was good reason to fear that the coalition meant menace to his beloved city.

"Stop that infernal drumming, A-6," Charles said sharply.

The captain flushed. "I'm sorry, magnificence. It shall not happen again."

Comrade Ahrens leaned forward, speaking softly. "Captain Arles has something on his mind?" He did not approve of numbers for men.

The captain flashed him a grateful look. "Yes, sir," he said.

"Well, what is it?" Charles said impatiently.

"It—it's about the Outlands, magnificence."

"Dangerous, I suppose," Gola sneered.

The captain squared his shoulders. He spoke earnestly. "They are, sirs. Before we started, there was a report of vibrations on the Pisbor Channel. That's why we routed through Washeen. I'm afraid—"

"Of what?"

"Those vibrations, sirs, were characteristic of Redmask!"

There was a startled murmur.

"Redmask!" The dread name swung around the table like a multiple echo. The grim, implacable outlaw who raided the air-channels, from whose pursuit there was no escape! Before his coming, the outlaws had been a scattering of petty pirates; now they were organized, dangerous. Within the year, five ships had been lost; none ventured along the airways except under convoy. No one had ever seen Red-

mask's face—he took his name from the flexible, blood-red globe that always incased his head.

"Redmask!" Charles reiterated, and cast Gola a meaningful look. One of the reasons for his journey was to discuss with Carlos joint action against the outlaw. Comrade Ahrens caught the side glance and smiled comfortably.

"Bah!" continued the oligarch. "Our battle cruisers will take care of him." He pressed a button under the table, spoke rapidly.

"Send wine in, and the jester. We wish to be amused."

Almost before he finished, two men stepped through an opening slide-door. One was young and dressed in the single brown garment of a worker. His head bent obsequiously over a tray on which rested a cluster of rose-red cubes. He hurried from one to the other, offering the cubes with averted gaze, as if his very look would contaminate the presences.

They swallowed the tiny wine pellets, and a sparkle came into their eyes with the coursing of the concentrated stimulant through their veins. Captain Arles sat stiffly, ignored in the general chatter. Technics were not allowed to drink. As the worker bowed low before Janet, she trembled violently, so much so that the concentrate dropped from numbed fingers. The worker stooped, picked it up, and withdrew hurriedly from the lounge, brushing against the man who had entered with him.

Janet's eyes followed the worker, startled. There was a flush on her cheek, an animation that had been missing before. She did not even see the jester.

Nevertheless he was well worth looking at. He lounged against the door edge, a shock of tawny hair

retreating from bright-blue, ever-roving eyes. Grimness tugged at the corners of his lips, nor was there any subservience in the easy flowing grace of his posture. Underneath his arm he carried a wooden case of curious shape.

Charles turned and saw him. "Ha, here is the jester," he said jovially. The wine had loosed his usual aloofness. "Give us a song; one of your regular home and country and patriotism type. We wish to laugh."

The jester's eyes glinted. "I am not your slave, Charles of the Marches," he said coldly. "I play what and when it suits me, not your drunkenness."

Gola jumped furiously to his feet, his hand reaching under his yellow tunic.

Charles caught his arm, smiled. "He's amusing, the jester. A democrat, you know; from Washeen."

Gola sat down again. "One of those, eh? Licensed fools, throwbacks! Too stupid to realize that the world has progressed beyond them. Ready to starve for their independence; for their individualism. Bah!"

"I hear you raise natural crops," said Comrade Ahrens curiously. "Dig in the soil with spades and plows, and depend upon muscular toil and the vagaries of sun and rain."

"Yes."

"Why? Synthetic foods are easier to make; the machines do the work."

"That's just it," said the jester. "We prefer to work ourselves; we are not bound to machines."

The company roared. Even A-6, technic, permitted himself a contemptuous smile at the crazy democrat. Refusing the blessings of science, of organization!

"You are right, Charles," gasped Gola, wiping the tears out of his eyes. "He is an amusing wretch."

"I hear the crops failed you this year at Washeen," interposed Comrade Ahrens. "The machines never fail."

The jester stared with bright blue eyes, fathomless.

"Yes," he said at last in a low tone. "They failed. None of you will help."

Janet spoke up suddenly: "Why don't we do something, father? We can't let a million people starve."

"Don't bother your head with what doesn't concern you," the oligarch growled. "They are individualists. They refuse to be organized, to submit to a decent form of government. Let them stew in their own folly."

"Hear! Hear!" yammered Gola.

Charles made a quick gesture of distaste. He did not like Gola; he was certain he would not like Carlos, the dictator. The marriage was purely a matter of cold, calculating policy.

"Enough of that," he said. "Let us have music, jester."

The jester glanced surreptitiously at the time signal on his wrist. It lacked a minute of nine o'clock. As his eyes rose, he caught a simultaneous gesture on the part of Comrade Ahrens. The communist had been intent on the time, too. The big, blond man looked away quickly; he seemed to be waiting in strained unease.

The jester smiled thoughtfully, opened his curious wooden case with maddening deliberation, and took out—a violin! The instrument was of incredible antiquity, the only one of its kind in the world. Inside the case could still be seen dim lettering—*Antonius Stradivarius facit 1715.*

The resined bow poised in the air, waiting. The time signal on his wrist flashed—precisely nine o'clock. The bow descended, caressed the gut of the priceless old violin in the opening strains of an ancient, ancient song—Shubert's *Ave Maria*. The delicately weaving melody floated smoothly through the lounge, the ecstatic prayer of the human spirit, the accumulated longings of all mankind for the unattainable.

For a moment there was a hush: Janet hung on the notes with parted lips. Her encounter with the worker had softened her, made her amenable to the sentiment implicit in the olden piece. How different from the intricate cerebral elaborations that were considered music in Yorrick!

Charles listened with a smile. It was quaint, primitive, and therefore amusing. Gola was frankly bored; if one must have a meaningless succession of notes, let it at least be something brassy, fiery with martial wind, such as was blared out by the unhuman machines at Pisbor.

Comrade Ahrens was not listening. In the first place, music had no place in a well-organized scientific state; in the second place it was already after nine o'clock.

The lovely yearning strains rose and fell, casting a magic spell over player and girl. Then the bow caught harshly against the gut, made an eerie screech. The floor heaved unsteadily; there was the dull thud of a bump.

Captain Arles jumped to his feet, his eyes wide with alarm. The others were on their feet, too. Only the jester seemed unperturbed. He tucked the violin back into its case, snapped the lock.

There were confused noises outside, the tramp of many feet.

The captain sprang to the visor-screen switch. Charles muttered an oath and reached for the tiny cosmo-unit at his belt.

"No one is to move," said a deep bass voice.

A-6 froze in his tracks, Charles dropped his hand to his side, and Gola cowered away from the figure in the slide-door.

"Redmask!" gasped the technic.

The figure bowed mockingly and stepped into the room.

"Himself!"

Behind him poured a dozen men—wild, powerful-looking fellows. Men of every race, fugitives from every city-state, outlaws with prices on their heads. Conite disruptors trained on the presences, making resistance suicidal.

THE FIGURE THAT held all eyes, however, was Redmask himself, the fabulous sinister outlaw of the airways. He was tall and lithesome, his slender body incased in a green-leather jerkin, his head hidden under a blood-red globe of penetron.

"We've no time to waste," resounded his deep bass. "Charles of the Marches, Janet of the Marches, Gola of Pisbor, and Comrade Ahrens of Chico—follow us."

Janet's hand went to her heart. "Where are you taking us?" she quavered.

The deep voice chuckled. "To the Outlands for ransom. Don't be afraid, pretty one. You won't be harmed."

Charles stood straight and arrogant. "You are mad, Redmask. This time that globe of yours has placed your head in a noose. The battle fleet will blow you to nothingness."

The hollow chuckle resounded again. "Yorrick's fleet proceeds calmly along. It suspects nothing.

You forget my ship is equipped with invisibility magnets to bend the light around us. We'll be far away by the time the *Arethusa's* signals work again. Get going."

The outlaws sprang to their victims, prodded them along with deadly disruptors.

Comrade Ahrens burst out suddenly: "This is an outrage. You'll be made to pay heavily for this. Chico—"

"Shut up," growled a shaggy-haired Outlander, "or I'll blast you!"

A man picked up a stellite chair, heaved it at the visor-screen. The instrument was smashed into fragments.

At the sound some one flung himself into the room. It was the worker who had served the wine cubes. He stared wildly around, saw Janet prodded by ungentle shoves. An anguished cry beat from his throat: "Janet!"

The next instant he was upon the captor, thrusting at him with bare hands. The man staggered, flung him off with a heave of powerful shoulders. A savage oath snarled on his lips; he raised his disruptor.

"Don't!" cried Comrade Ahrens involuntarily.

The man lowered his weapon with a growl.

"Lucky for you you're a worker, not a damned oligarch. Next time I'll kill you."

Then they were out, the slide-door closed behind them, jammed by a blow into immovability.

The worker sprang to the door, beast upon it, crying out, "Janet! Janet!"

The captain remained rooted to the spot, palsied by the vision of Redmask. The jester stared at the smooth surface of the door as though the answer to a curious rid-

die lay there. His brows were furrowed. Only indomitable self-control had prevented an outcry at the sight of Redmask and his outlaws. Ignored by the raiders, the unimportant democrat had noted everything; the hesitating walk of Redmask, the strange behavior of the worker.

Suddenly he made a gesture of annoyance. He ripped the violin out of its cover, fairly flung the bow across the strings in a wild dance or saraband.

"Are you mad?" ejaculated the technic.

But the player paid no attention. The bow raced on, the notes poured out in a glittering spray, until a final flashing crescendo brought the piece to a close. The jester's brow was dewed with sweat as he replaced his precious instrument in its case.

The worker swung around with a tortured, furious face. He was no longer stooped; his voice held a commanding ring.

"A-6, smash that door down; get a signal through to the battle fleet. Your life depends on it. You, fool, lend your shoulder. We've got to break through."

Captain Arles took a short step forward. "You forget yourself, worker."

The man wiped his face with a brown sleeve. The stain vanished. Pale oligarchic features emerged.

The technic moved back, bowed almost to the floor. "Edward of the Hudsons! I didn't know—"

"Of course you didn't. All together now."

The three bodies crashed solidly against the jammed door. There was a creaking of metal, an outward bending. The next concerted heave, and they were through. Members of the crew surrounded them with a

babble of words. Edward pushed imperiously past. In seconds the captain organized discipline out of terror, had rigged up an emergency set. Though he worked with breathless speed, Edward, pale and agonized, lashed him on with excoriating words.

At last the screen gleamed clear. Outside the scene was peaceful, undisturbed. The battle fleet swept easily along, hemming in the *Arethusa*, guarding it with squat, armored bodies. The Outlands were a rippleless carpet of green. Nowhere was there a sign of the bold raider, of Redmask and his captives.

In seconds more the scene had changed. The armored cruisers shot into emergency power, rocket tubes roared into flaming combustion. Out of the channel they flung, scattering in mad search for an invisible ship.

"They'll never find it," said the jester. "I would suggest—"

The young oligarch turned on him furiously. "Who are you to suggest?"

A queer smile played around the democrat's lips. "Only a jester," he remarked calmly, "but a free man nevertheless. I am trying to help. Without me you will never find your lady."

The oligarch searched his face. Their eyes held. Some strange bond of sympathy passed between them. Edward came to a sudden decision.

"I accept your help," he said. "We love each other—Janet and I. Charles, from motives of policy, pledged her to Pisbor's dictator. I could not let her go alone; I disguised myself—I thought—" His voice broke off, his pale, slender hand caught the muscular jester by the shoulder. "We must find her!"

"Trust me," said the democrat. "My real name, if it makes any difference, is Stephen—Stephen Halleck. I have my own reasons for finding this—Redmask. Give orders to proceed to Pisbor as if nothing had happened."

Edward started to say something, shrugged his shoulders. Stephen, jester, democrat, whatever else he was, radiated confidence. And no other course seemed of any practical value.

II.

PISBOR LABORED under unprecedented excitement when they arrived. The great dome of *impermite* lay dazzling in the sunshine. The electron-stripped element, fabulously heavy, was as impenetrable to offensive weapons as the space-warp of Yorrick, the web-curtain of Chico. A section rolled open as the *Arethusa* approached, closed automatically behind it. The battle fleet remained disconsolately outside. The dictator, even with marriage ahead, was taking no chances.

The *Arethusa* had hardly touched its cradle when Edward of the Hudsons flung out. All thought of disguise was gone; command clung naturally to him. Stephen was a few respectful paces behind. As democrat and licensed jester, he was innocuous, privileged to roam as he pleased. Captain Arles and the crew remained on the ship, sealed in by the vigilant guards of the dictator.

Stephen stared curiously around, though it was not his first visit to the city.

Within the orbéd confines of the *impermite* dome were scattered blockhouses, cubed barracks built of *penetron*, the synthetic translucent substance that could be rendered

transparent only by the infra-red beam-ray of the dictator. Thus no smallest act of his subjects escaped his scrutiny; an invaluable deterrent to conspiracies. As further protection, it was possible to cross-rake the thoroughfares between the blockhouses with deadly conite disruptors.

The squares of the city were black with Pisborites, all staring upward through the dome at the massed fleet of Yorrick. They were powerful-looking brutes, broad-shouldered, low to the ground, with long animallike arms. Their squat faces were dull, uninformed with intelligence, degraded through long centuries of subservience. Even now, with the strange spectacle of the *Arethusa* within, and the battle cruisers outside, the apathy of their countenances was unmoved, their talk a low chattering.

A voice ripped out of the air, unhuman, metallic; a machined combination of syllables not issuing from human larynx.

"Let the strangers ascend to my presence."

Edward looked up in astonishment. It was his first visit to Pisbor. It was then he noted the great black-shining globe suspended from the topmost round of the dome. A small oval ship came slanting down to drop at their feet. A port opened, and a man gestured for them to enter. The port closed and the vessel ascended, coming to a cradling jar against the surface of the sphere.

Their conductor unhooked a tube from his belt, flashed it over their bodies. At once they sprang into X-ray illumination. The solid flesh seemed to melt away, leaving only dark-shadowed skeletons behind. Edward exclaimed angrily, but Stephen checked him with a smile.

"It's a search beam," he explained. "The dictator makes sure that no one approaches his august presence with weapons."

The tube flicked off, and flesh clothed them solidly again. They were ushered into the great sphere, the dwelling place of the dictator. This was a city in miniature. Stores of supplies, food pellets, weapons, enough for a long siege, filled half the curving sides.

Picked Pisbor men, trained for special duties, glided around, cat-footed. Complicated machines shone white against the black, operators vigilant at the controls. Power came from the solar rays, transmitted intact through the *im-permit*e dome.

Even in here the dictator was apart. At the top of the sphere was a smaller replica, suspended. A swinging ladder dropped down, dangling.

"Climb to the presence," said the unhuman, metallic voice.

Edward's brow darkened. "Damned if I will! I am an oligarch of Yorrick."

Stephen whispered: "There was an ancient saying, 'When in Rome, do as the Romans do.'"

"Never heard of it, but—" Edward was sensible for an oligarch.

They swung themselves aloft and entered the smaller sphere. The jester held tight to his ever-present violin.

Light gleamed dazzlingly, making them blink. The dictator was in semidarkness. Carlos, thirteenth dictator of Pisbor, lived in constant fear of treachery. Around him now were his most trusted underlings, yet at night even they must descend, leaving him alone. His fingers never strayed from the arms of his chair, where button controls unleashed terrible weapons at a touch.

AN OLD, INCREDIBLY old, man he was, with wrinkled, parchmented skin and pouchy folds, clad in gorgeous finery that served only to mock his ugliness. Only the eyes showed life—they glittered with hard ruthlessness.

He glanced indifferently over the jester, fastened his eyes with strange intentness on the young oligarch. Edward stood proud and straight under the scrutiny.

Suddenly the clawed fingers moved on the arms of the chair. The metallic voice issued, though the dictator's lips did not open. This was an artificial sounding board; the dictator had been dumb these many years.

"You come from Yorrick?"

"Yes."

"Where is Charles of the Marches, and Janet, my bride?"

Edward controlled himself with an effort. Janet in the arms of this hideous caricature of a human being—better death, better even her present predicament.

"They have been captured by Redmask," he answered steadily.

The hard unwinking eyes stared with masklike quality.

"Redmask!" repeated the voice. "Yes! I know him. Once he was my slave; now he is a traitor."

Stephen's lips twitched.

Edward asked: "How do you know?"

"His mask. It is *penetron*; the secret of its manufacture is my own. The slave stole it."

"You must help, Carlos," said Edward impatiently. "There is no time for much talk. Equip your fleet for instant service. I shall return to Yorrick for more ships and more men. We must root out Redmask once and for all."

The dictator sat like a graven mummy. "Softly, Edward of the

Hudsons. I know my task; orders have already been issued. Let us talk about you."

"What about me?"

"The safe conduct of the *Arethusa* calls for two oligarchs only; Charles and Janet of the Marches. There is no mention of an Edward."

The young oligarch flushed. "At the last moment, too late for the identification signal, Charles asked me along."

"The story is thin," retorted the inexorable voice. "Why, then, are you dressed in worker's brown?"

Edward took a deep breath, determined to bluff it out. "Very well, then; you disbelieve an oligarch of Yorrick. The *Arethusa* leaves at once."

"Not until I give the order."

The hot-headed youngster took a step forward. "You dare hold me a prisoner? The Yorrick fleet will blast you."

The withered mask broke into a bony grin. "*Impermite* will withstand even your battle cruisers. In the meantime—"

A fleshless finger depressed a button. At once Edward congealed in forward movement. Stephen could see the furious astonishment on his face as he strove ineffectually to move. A paralysis ray held him tight. Two Pisbor guards sprang forward, caught at him to prevent his falling.

"Take him away," said the voice.

The helpless oligarch was lifted unceremoniously like a sack of Washeen flour and hurried down the swinging ladder. The jester's eyes caught the imploring glance of the young man, but there was no answering gleam, nothing but mild indifference.

He turned to the motionless dictator. "And I, Carlos?"

The toothless mouth split con-

temptuously. "Make me laugh, jester. I am gay with consummation of my plans."

The democrat looked at the grinning death's-head in front of him; tilted his firm-molded face, laughed long and vigorously.

"Laughter, is it, then, oh Carlos? That means music."

"Music! Ha, ha!" the mechanical voice grated. "That squeaking and squalling of your barbarous instrument sounds more like a Pisbor man with a bellyful of *opine*. Now there's a thought. Assail my ears with your scrapings. Yes, that will amuse me!"

Stephen looked at his time-signal. Only seconds to ten o'clock. He had gauged it correctly. He uncased the precious Stradivarius and, without more ado, drew his bow across it. A martial air sprang forth, an air that had been composed in the twenty-sixth century. Tanks lumbered into battle over quaking ground, rocket-cruisers took off with dull roars of flame, soldiers marched with grim, even tread, shells whined and ricocheted, groans mingled with the shrieks of the dying. The bow glissaded and twanged, the violin quivered with the tumult it created. Then, suddenly, a plucked note as of death snapping the cord of life, and it was over.

The dictator nodded his head approvingly.

"Now that, jester, was almost music. If it were not for the wretched squeaking of your instrument, I would almost have thought it our own."

Stephen bowed humbly. "I am sorry. I thought to make you laugh."

"It is just as well. Descend to the city. To-morrow you leave. You know the rules."

III.

THAT NIGHT THE JESTER roamed, unmolested, the squares of Pisbor; a licensed fool, a lowly democrat. He watched the well-fed bodies of the Pisbor men, saddened at the memory of famine in his own city of Washeen. Yet none of its citizens, he reflected proudly, would yield one jot of their free, independent life, even with death the result, for this bestial, degraded, bodily comfort; not even for the regimented, birth-to-the-grave-ordered life of the communes.

At two in the morning the squares were deserted, the domed city dark. Yet he roamed on with seeming aimlessness. For once his violin was not with him. A round, inconspicuous button on his tunic glowed redly in the restless sweep of the infra-red search beam. The democrat moved swiftly out of range. He did not wish Carlos or his underlings to know of his wanderings.

At length Stephen came to his destination; a smooth-walled building on the periphery of the city. It was the dread prison of the dictator. He glanced swiftly around. No one was in sight. The telltale button was dark in the shadows. He bent over, touched a hidden spring in the heel of his thick-shod shoe. A tiny sliver of beryllium-steel, needle-pointed, darted a half inch out. He banged the heel sharply and jarred the microscopic grid-plate into activity. The needle point glowed redly.

Lounging idly against the wall, eyes intent on the darkened square and on the button of his tunic, he moved his heel over the translucent metal of the wall. Once a change of guard passed, and he shrank into the deeper shadows. Once the restless, questing beam of the dictator

glowed the button into redness. A quick side movement jerked him out of range. Three feet horizontally near the ground, two feet up with lifted heel, three feet back again, parallel, and two down. As the cut-out plate fell forward, he caught it neatly, laid it softly on the ground.

Stephen threw himself flat, wriggled into the black interior. Inside, he stood up, groped experimentally. The wall gave him his bearings. Where was Edward in this morguelike place? He did not know, and every passing moment was precious.

He moved slowly along, feeling his way. Suddenly his fingers touched something soft. There was a startled grunt, an exclamation, the beginning of a shout.

The democrat lunged forward desperately. By sheer luck his hands caught at a throat, throttled down until there were only wheezy, choking gasps. The body sagged. He released one hand, ran it over the man's waist. Something dangled. He unclipped it, twisted. A pencil beam pierced the darkness. It moved up the man's body, held on the mottled, distorted face of a Pisbor guard. The eyes were glassy with terror.

Stephen dropped his hand suddenly, caught at the conite disruptor on the belt, hefted it significantly.

"Not a word, not a sound, if you wish to live," he said in a fierce whisper.

The man nodded dumbly.

"Take me to the man from Yorrick who was brought here to-day."

The guard nodded again, cowering away from the pressure of the tube. Silently they glided through corridor after corridor. At last the Pisbor man stopped in front of a blank surface.

"Open it," Stephen whispered.

The guard moved his hand over the surface, and the wall seemed to melt away. They stepped in.

"Who is there?" came a voice.

"Sssh, it is I, Stephen."

The pencil beam held on an astonished oligarch. Edward's lip curled in searing contempt.

"I might have known a democrat has no honor," he said bitterly.

"You misjudge. I am here to rescue you. Don't waste time. Get into his clothes."

Incredulity gave way to flooding relief. Without a word the oligarch helped strip the frightened fellow of his yellow-skirted garment, doffed his own. With swift, sure movements he donned the coarse material next his delicate skin; shredded his own worker's brown into long strips, while Stephen wove them into strong lashings to truss and gag the Pisbor man.

They left him there and moved cautiously into the corridor, using the pencil beam only for momentary guidance, until they emerged, breathless, from the oblong section into the open square.

"Thanks," said Edward, taking a deep breath. He extended his hand. "You are a man, even though—"

"A democrat," Stephen finished wryly, but took the proffered hand nevertheless. "The hardest task comes now; to get out of Pisbor."

"Easy," said Edward confidently. "We'll head for the *Arethusa*. Once inside, Carlos won't dare hold me. It would mean war with Yorrick."

Stephen shook his head. "I'm not so sure. He has deep plans I haven't fathomed yet. No. We're not going to the *Arethusa*. Follow me."

THE YOUNG OLIGARCH followed. They skulked through square after square, meeting no one.

At one place, the jester burrowed suddenly into a pitchy hole, lifted a familiar case.

"Without my violin I would be lost."

They went on again, until they came to the cubicle nestled against the *impermite* shell, from which the exits were controlled.

Stephen stopped his companion. "Now this is what you have to do." He whispered his plan.

Edward nodded and stepped boldly up to the cubicle. His uniform was the uniform of a Pisbor guard; pencil beam and conite disruptor swaggered at his belt. His left arm had a firm grip on the jester, who dragged his feet as though unwillingly.

"Who is there?" called out the control guard at the scuffling sounds.

Edward held his face in shadow, thrust the jester violently inside.

"Orders from the dictator. Cast this wretched fool into the Outlands. He does not amuse Carlos any more."

The control man was a superior type. "Keep away!" he shouted angrily to the lurching democrat. His left hand fingered a disruptor. "This is strange. The dictator switched no orders to me. Come forward, guard; let me see you."

The oligarch came forward, weapon thrusting. The control man cried out, jerked at his belt. Stephen dived suddenly, caught his hand in a crushing grip, twisted him to his knees. In seconds he was bound in his own shredded garments, and the jester, who seemed familiar with the mechanism, swung the proper lever. A small section rolled open in the *impermite*, just as the button on his tunic glowed red. Stephen jerked aside, but the beam followed, and held. At once

the sleeping city filled with clamorous sound.

"Run for it!" he shouted, shoving the bewildered oligarch ahead of him. Together they dived through the opening into the starless, moonless black of the Outlands. Stephen's foot barely cleared when a blinding ray slashed through the control cubicle. Had either one been in its path, he would have been crisped to a cinder.

The cool fresh air smelled sweet.

"Run as you never ran before," said Stephen. "The whole city will be swarming after us in seconds." Already the pounding of feet, the lift of sodden voices, tore through the exit gate.

There was a clearing of a hundred yards around the dome. Beyond was the thick entanglement of the forests. The fleeing pair bent heads low and scuttled like scared rabbits. The city spewed forth armed men. A bellow to halt, and the searing flash of disruptors crackled through the air. Then the pitchy gloom of the trees infolded them.

The jester ran lightly, Edward barely managing to keep the phantom form in front. The noise of pursuit died in the distance; still they ran. At length Stephen came to a halt in a little clearing. He seemed to know the place.

"We are safe now," he said.

Edward sat down and panted. "If only we could signal the battle fleet."

"No good. They cleared for Yorrick at midnight. There'll be war."

The oligarch looked fearfully around at the rustling darkness. He was brave, but the city men were not accustomed to the woods—and the Outlands were dangerous places.

"What shall we do then?"

"Wait!"

Five minutes they waited, then an

owl hooted. Edward jumped; his nerves were on edge.

Stephen hooted back. A pause, then another hoot, closer.

Men flitted like shadows into the clearing. A light glowed suddenly, throwing the glade into warm relief. Edward blinked and thrust up his weapon. These were outlaws; he would go down fighting.

Stephen said: "You are safe. These are friends."

There were a round dozen of them, wild-looking fellows, all in green jerkins. Men of Pisbor and Yorrick and Chico, as well as other cities of the continent. No democrats among them. They held assorted weapons and glanced curiously at the young oligarch, but made no move.

"Just a moment," said Stephen, and took one who seemed their leader aside. Their voices came muted to Edward. The conference was soon over. Half the men melted unobtrusively into the night at a nod; the others waited.

The jester turned to Edward with a grim smile. "The matter is becoming more and more complicated. We had better be on our way."

Edward rose, faced him. Once more he was the oligarch, the holder of men's destinies in his slender hands. The rustling Outlands had frightened him, but men—never!

"Stephen Halleck—democrat—jester—whatever you are," he said with great clearness. "Before I move a step, you must explain—everything."

The jester shook his head. "Not—everything. This much, though. I am in fact a native of Washeen, a jester according to the lords of the cities. These outlaws are my friends; I sympathize with their human desire for freedom. They are willing to help me—and you, be-

cause you, an oligarch, have offered your hand to me in friendship. They hate this Redmask as much as I. It is your only chance to save Janet and the others."

Edward was no fool. There was more to it than just that. He pondered quietly and said: "Very well. Let us go."

THE MEN ROSE and the glow died out. They threaded their way with the ease of long experience through the forest tangle. A voice challenged suddenly; some one answered. Edward felt the ground giving way; they were dropping as if on a platform. The ground halted, some one tugged at his elbow. He moved to one side. There was a creaking sound, followed by silence.

Then there was light. He blinked and looked around. He was inside a huge, artificially hollowed cavern, fitted to hold an army, stored with many months' supplies. Men sat on the ground and chatted. Others slept, and still others labored in various ways. A veritable city in the bowels of the earth.

"One of the many strongholds of the Outlands," Stephen murmured in his ear. The inevitable violin was still tucked under his arm. "You will of course never reveal their secrets when you return to Yorrick."

Edward drew himself erect. "The word of the Hudsons. But—I thought Redmask ruled all the Outlands."

The jester smiled strangely. "These men do not recognize Redmask. But they are calling; things must be in readiness."

They made their way rapidly through the groups toward a tiny flier of peculiar shape. Instead of the usual cigar or oval frame, this

one was hemispherical. One side was flat and a disk plate protruded.

The men watched them curiously as they passed, hushing their voices, but making no outward sign or comment. The gangplank was down. They climbed into the ship, and the port closed behind.

An outlaw met them in the little cabin.

"What are the orders?" he asked Stephen.

The jester chuckled. "Who am I to give orders! Your chief has told you where we must go."

The man laughed hastily, a bit uncomfortably, Edward thought.

"Of course, of course!"

He moved to the controls, did things. There was a slight humming sound; Edward felt the ship lifting. Stephen rummaged in a locker, and brought out close-fitting breeches and shirt of blue cellophane.

"Put these on," he said.

The oligarch obeyed without question. "Are we outside already?" he asked after a decent interval.

"Yes."

"Mind if I put on the visor-screen?"

The jester smiled. "I'm sure there'd be no objection."

The oligarch forked the switch before the blank screen. The gray dull surface turned impenetrable, light-absorbing black.

Edward was annoyed. "The screen is out of order."

"Not at all. Look!"

The democrat slid open a port. Edward peered out; saw nothing but the same palpable black. There seemed to be a total extinguishment of light.

"What does it mean?"

"You forget. The outlaws have invisibility magnets. That is why they are able to attack the airways,

even under the nose of a convoy. Remember how this Redmask slipped unseen into the *Arethusa*."

"What is the principle of it?" the oligarch asked curiously. "None of the city-states seem to have it."

"There is a very good reason for that. Redmask himself invented it. The idea is simple. Superpowerful magnets deflect the light waves that flow toward the ship, cause them to bend around and meet again on the other side. Which means that there can be no reflected light from the ship to provide visibility, and no void in space to show as a blank spot. It also means that no light waves from the outside can come into the ship, or impinge on our retinas, so that while we cannot be seen, neither can we see."

"Clever!" said Edward admiringly. "I should have gone in for science if I hadn't been born an oligarch. But we are flying blind, then."

"Not quite. We have spy instruments that bring us the most delicate vibrations. The magnets reflect only light wave lengths. We swerve automatically from obstacles; we are held automatically to our course."

"Spy instruments!" the oligarch echoed. "Those are Yorrick's secret."

"You forget," said Stephen a bit grimly, "the outlaws are fugitives from many cities; once here they keep no secrets."

The helmsman came over, spoke in a low voice to the jester. He turned to Edward.

"News! The full battle fleet of Yorrick is over the Outlands. Half are searching for trace of Charles and Janet; the others have met a fleet out of Pisbor in battle. It's in progress now."

The young oligarch's eyes flamed.

"War! With me cooped up here, instead of at my post! Turn back at once."

"No." The answer was decisive. "We'd be cut down as soon as observed, once we lifted our magnetic flow. Furthermore, you could do no good. The whole fight is silly. Even if either fleet be totally destroyed, the barriers of the defeated city would still be impregnable against the victor. Janet's fate does not depend on the outcome of the battle; neither does Redmask's."

Stephen frowned. "I wonder why—"

"What?"

"Why did Carlos send out Pisbor's fleet?" He sighed. "It's very confusing."

THE FLIER SETTLED softly to the ground.

"Invisibility magnets off," reported the helmsman.

"We are going out," said Stephen. "Snap them on again as soon as we are gone; wait here for us. In no circumstances move from the spot, unless you receive the proper signal."

"Where are we?" asked Edward.

"You'll see." The jester picked up his violin case. "My stock in trade," he explained. "Without it I would not even be a jester."

They stepped out into the early-morning air. The sun was just floating up over the treetops. The dawn was pearly with mist. In the distance towered a city. It shimmered in the mist, far more than could be laid to its account. To one side stretched a large body of water, broken into irregular patches by the intervening trees.

"Recognize it?"

Edward shook his head.

"It's Chico."

The oligarch stared at the mag-

ically dancing city. He knew now what the vibrationlike movement was. The Web-ray of polarized short waves, shorter even than cosmo-units, impenetrable to any weapon or mode of attack. Behind it, safe and secure, was the greatest commune on the continent. The city of Comrade Ahrens, captive along with the Marches, and Gola, the Pisbor ambassador.

He turned on the democrat in sudden anger.

"Why did you bring me to Chico?" he cried. "Redmask would not be here; his haunts are east of the Alleghanies."

"This Redmask is an ubiquitous fellow," Stephen remarked cryptically. "He seems to have the faculty of being in several places at one time. In any event it would be interesting to note Chico's reaction to Comrade Ahrens' kidnaping."

Edward looked down at his blue cellophose. It was the costume of the commune.

"I see," he said slowly.

IV.

THE REACTION OF CHICO was unmistakably definite. The city was buzzing like a nest of angry hornets. Comrade Ahrens had been one of its ablest and most powerful members.

There was no trouble about the two wanderers. The guard lifted the Web-ray readily enough. The jester was known, treated with a species of kindly contempt. Edward, in the garb of a communist, passed easily in the general excitement. They entered at once into the ground floor of the city.

The commune was a single building, of ultra-cellophose stiffened by feralum girders, to permit the beneficial rays of the sun to pene-

trate every nook and cranny without dazzle. The great structure extended over five miles square and towered a full two hundred stories high.

Every unit of space and every activity was carefully planned. Ten stories deep into the bowels of the earth were the atomic disintegrators, the machines that swallowed handfuls of crushed rock and spewed forth resistless power. The first ten upward-thrusting floors were storehouses; then came the laboratories, synthetic factories, the sleeping quarters, administration centers, rest and recreation solariums; and, overtopping all, the incubators and schools.

For marriage was a eugenic institution; love had no part in mating. Nothing was left to chance in the communist city-state. The council decided how many new children were necessary to carry on effectively the work of the commune, and gave orders accordingly. They decided in advance of birth what niche in the scheme of things the prospective youngster was to fill, and varied the inheritance-changing rays. From birth to death everything was planned, regimented.

Because the city was in a turmoil of excitement, the pair were able to roam from floor to floor with unwonted freedom. Ray-messages crackled along all the airways—to Yorrick, to Pisbor, calling upon them for united efforts in the search for the missing captives, thereby breaking the isolation rule of centuries. Wild broadcasts to Redmask, too, threatening unutterable retributions if Ahrens were not forthwith released.

A carefully casual search of the city disclosed nothing. Stephen mopped his brow, looking thoughtful.

"It is certain they are not here," he said at length.

Edward stared his surprise. "Did you expect to find them in Chico?"

"I don't know." Stephen sighed. "Let us go back."

Once more they were in the Outlands, plunged in the great billowing forest, headed for the invisible ship. They were about a mile out from the city when the jester stopped his companion with a gripping arm.

"Sssh! Do you hear that?"

Edward strained his ears, heard nothing. Then, faintly, so faintly that it seemed only a murmur of the wind, came a thrumming, throbbing sound.

"Ships far off on the airways," he said.

"No. That sound doesn't come from the air. Listen again."

Edward inclined his head to cup every available vibration. "Why," he exclaimed, "it—it's in the ground!"

Stephen nodded. "Exactly!"

Edward went down on his hands and knees, placed his ear to the bare earth. "There must be another outlaw cavern below here." His face went grim. "Perhaps we have located Redmask."

"Perhaps," agreed the jester. "I've never heard of these quarters before."

The oligarch rose, gripped his conite disruptor. "How do we get to them?" he asked softly.

Stephen was already coursing over the ground. "It depends on whether this cavern follows the usual pattern."

An exposed root of an aged oak caught his attention. It was shaped like an S before it curved back into the soil.

"It does," he said joyfully. He tugged three times at the bellying

middle; quick, sharp jerks. Nothing happened.

"Strange," he muttered. "I could have sworn— Perhaps—"

He tugged again, varying the number of pulls. Still nothing. He rose, face clouded with disappointment. In so doing, his toe caught in the tough fiber and he sprawled headlong. Left hand still holding the precious violin, his right reached frantically out to cushion the fall. His fingers caught in the leathery vine that clung to a neighboring oak, jerked to hold him aloft.

Edward gave a sudden cry of alarm. Stephen pulled himself erect, turned to see a section of earth on the other side of the root sinking slowly. The oligarch, startled, was crouched to jump up to solid ground.

"Stay on!" yelled the jester, and made a flying leap into the deepening pit. "It was the vine," he said, peering into the darkness to see the smooth walls of an elevator shaft. "That's a new trick."

"Have you a weapon?" Edward whispered fiercely.

The jester hugged his violin case tight.

"No," he said. "That is why I come and go freely, unquestioned."

The platform, a steel square, and covered with a foot of earth and grass to conform to the ground above, came to a noiseless halt. The two men stepped into a dark chamber. As they did so, the platform, released of their weight, moved upward into position.

"How shall we ever get out?" asked the oligarch.

"We've plenty to do before that," Stephen told him grimly.

VERY CAUTIOUSLY they moved to the end of the chamber, feeling their way along. A passage

way made a darker blob. It turned and twisted, then, ahead, shone a glimmer of light. The murmur of voices came muffled. They crawled forward, Edward panting slightly, clutching his disruptor. If only he could find her.

Stephen pulled him suddenly down. They were at the edge of a cave, artificial without doubt, but not as large as the one into which the oligarch had first been brought. The even glow of the *radon* illumination made a setting for a group of figures toward the farther wall.

The young oligarch made bitter clucking sounds, strained forward. The jester clamped him down hard with his free hand. "You fool!" he whispered harshly. "You'd be burned down before you moved two feet. Don't you think I knew what was down here?"

The proud oligarch took the epithet without resentment. He was only a very human, anguished lover now.

"But Janet," he implored. "If we don't do something—"

"Nothing will happen to your Janet, yet, but if you don't let me handle this my own way, none of us will ever see the sun again."

Edward sank back to the ground, veins cording in his neck against the instinct to rush the outlaws. Janet was seated at the farther end, back to the wall, bound. So, too, were Charles, her father; Gola, the Pisbor ambassador, and Comrade Ahrens. Facing them, backs to the watchers, were a dozen men, clad in outlaw green. The tall man, standing a little apart, swaying slightly on widespread legs, held dramatic attention.

"Redmask!" Edward breathed with sullen hate. There was no doubt as to who it was. The terrible, fear-inspiring *penetron* globe

enshrouded his features. No one except a few trusted lieutenants had seen Redmask's face and lived.

A voice rose shrilly. It was Comrade Ahrens speaking

"You must not kill us. We will do what you wish. Chico will back me up."

The man in the red globe sounded hollow and deep.

"You are not the only one. The others must follow suit. Either all agree—or all of you die."

There was terror in Gola's eyes, but he said sullenly: "I've told you before; I can promise nothing. The dictator cares little for me or any one else."

"You can communicate with him and find out. If not," ended the globed one ominously, "death will not be easy."

Gola snatched eagerly at the hope. "I will do that, surely. I'll write; I'll tell you what secrets of Pisbor I know."

Charles of the Marches sat straight and immovable. His quiet even tones cut across the cavern like an edged sword

"If this business depends on unanimity, we may as well prepare now for death. I for one shall never consent to Redmask's damnable terms, nor would I permit Yorrick to carry them out, if agreed to." His voice grew stronger. It was the oligarch, with centuries of tradition behind him, unspoiled by the new deliberating luxury, who spoke.

"Your plan, Redmask, for an outlaw, is superlatively clever. It calls for practical continental domination on your part. Yorrick and Pisbor and Chico are to remove their guard defenses, and the secrets we have each closely held are to be exposed for your inspection. In such circumstances it would be only natural for you to become master within a

month. Clever, but blind to certain defects.

"Carlos will not yield power because of Gola; Yorrick will not submit because two oligarchs might happen to die a bit sooner than their natural life span calls for. As for Chico," he glanced contemptuously at the bound communist, "I fail to understand what hold Comrade Ahrens has on an equal community of five million. It just won't wash, Redmask. You might as well free or kill us now."

Ahrens spluttered indignantly: "Speak for yourself, if you wish to die. As for me, I can give guarantees Chico will protect my life."

Stephen, prone and listening intently, muttered to himself: "I never expected Ahrens to turn coward."

Edward writhed in anguish. "For God's sake, let's do something! Janet will be killed."

"Not yet. I want to hear more."

The man in the red mask chuckled. "You needn't worry about the others. The dictator is an old man; he is set on having your daughter for wife." Edward ground his teeth in silent rage. "He will do a lot to marry an oligarch. He won't read between the lines as you did. As for Yorrick, I know that, if you wished it, the oligarchs would follow your lead. They have not your Spartan fortitude. Remember, Janet dies under torture if you refuse."

"I refuse." There was a finality to the simple words.

Redmask moved purposefully over to the bound girl. In his hand was a needle-ray that could burn fine, horrible crisscrossings over the body.

Janet screamed.

Edward of the Hudsons bounded to his feet and, roaring indistin-

guishable things, flung himself into the cavern. Stephen, caught unawares, jerked out a hand to stay him, missed.

"The fool!" he groaned.

The young oligarch had gone berserk. The conite disruptor pumped its deadly stream of contact pellets. Wherever one touched, the surrounding matter disintegrated into energy, leaving great gaping holes.

V.

THE ATTACK WAS a complete surprise. Men jumped to their feet, reached frantically for weapons. Even as they did so, man after man staggered, screamed, and broke in two, magical gaps where legs, arms, torsos should have been. The man in the red globe pivoted unsteadily around, groped blindly as if he could not see, threw himself flat on the ground.

But the surprise element was over. With half a dozen of their number dead, an outlaw flung himself to one side, jerked out a tiny parabolic reflector; pressed. A blue radiance hurled through the air, infolded the oligarch.

The disruptor dropped from his suddenly nerveless fingers; his whole body stiffened into stone. The survivors dived for him with roars of rage. Comrade Ahrens' voice rose high above the tumult.

"Don't kill!" he shrieked. "I agree to all terms."

The man in the red globe rose unsteadily to his feet, barked out a command. Sullenly the men held their rigid captive; lowered deadly weapons.

"Bind him. Bring him to me."

Stephen had snapped open his case, was fingering his priceless Stradivarius. Now he replaced it tenderly and closed the lid.

Arms bound behind him, the young oligarch was roughly propelled forward. He could not speak or move. The paralysis ray held him helpless.

Janet shrieked: "Edward!"

Charles strained at his bonds, his wonted hauteur gone.

"Edward of the Hudsons! How did you come here?"

Silence. The man in the globe swayed irresolutely.

Gola muttered: "Damned if he doesn't look like the worker on the *Arethusa*."

The red-masked one said. "Give him the anti-injection."

An outlaw produced a hypodermic, jabbed it into the bare arm. The flesh turned slowly warm.

"Yes, it is I," said Edward very calm and very quiet. The paralysis had left him.

The brow of the bound oligarch clouded. "You were disguised, Edward. You tried to cross my plans."

"Why not?" the young man burst out passionately. "You knew Janet and I loved each other."

"Father, we do! I don't want that horrible old man." The words tumbled from the girl.

The oligarch looked from one to the other. There was silence at his gathering wrath. It seemed forgotten he was bound, a prisoner.

"This will cost you dearly, Edward," he said tonelessly. "It was necessary for Janet to marry Carlos. Much depended on it. What mattered your little calf love! Oligarchs should rise superior to personal desires. I shall see to it that you are eliminated."

"Don't, father! Don't!" Janet screamed hysterically.

In a way, it was ludicrous. Yet for a moment no one thought of it that way. Then Ahrens giggled nervously. That broke the spell.

The tall man in the *penetron* globe said sarcastically "Don't order the elimination of others until your own disposition is decided on. Edward of the Hudsons, you come in good time. Unless you lend your voice to convince Charles and Yorrick, you will have the pleasure of watching your loved one suffer."

Edward flung himself against the restraining grip of his captors. "Let her alone, you scoundrel," he panted.

The red-masked one seemed not to hear. The needle point came up.

Stephen thought it was time for him to act. He got up, tucked his violin case under arm, and walked quite calmly into the cavern.

The outlaws whirled at this new interruption, weapons ready to burn the rash intruder down.

Ahrens cried out: "The jester!"

Others took up the name.

Stephen walked coolly on. "Of course the jester! Who else? Poor harmless jester, who is everybody's friend."

The man in the mask said angrily: "How the devil did you get in?"

The democrat raised his eyebrows in mock surprise.

"Why, by the front door. It was open."

"You fool! You've let yourself into a place from which there is no going out."

"Why not?" Stephen seemed astonished. "Everybody knows the jester; he is everybody's friend." His voice was singsong. "He wanders in city-states and in the Outlands; he knows the outlaws' lairs and says nothing. He is only a democrat, a man whose city is despised by all. He plays his ancient instrument wherever he goes; no one bothers him. He gives joy to those who understand and mirth to those who do not. See!"

He snapped open his case, took out his fiddle. Bow touched gut lightly.

"Stop it, you fool!" the masked man said angrily. "We've no time to waste on nonsense."

STEPHEN, HOWEVER, HAD begun his song. The strains rippled through the great rocky cavern with the richness of old carpets from Ispahan. A strain from forgotten days when music was warm, glinting melody, pulsing under the touch of human fingers, not cerebral integrations of sound. The weaving, haunting, magical *Waldweben* from Siegfried.

A man came running out of a side chamber. His garb was the outlaw green, his face contorted. He jerked to a stop, saw the tall figure of the jester, heard the once-immortal melody. Terror snatched at his features.

"Stop him!" he cried hoarsely. "For God's sake stop him! He is the——"

"Yes, stop him. And that goes for all of you."

The new voice was ominously cold, unhuman. It came from the passageway.

Every one whirled. Stephen stopped, put his instrument carefully back into the case. Carlos, dictator of Pisbor, was in the chamber, seated in his chair of state, aloft on the shoulders of four men of Pisbor. His long clawlike fingers rested on rows of buttons. Behind him crowded his men, conite disruptors leveled.

"Drop all weapons!" came the mechanical voice. "Stay where you are."

There was nothing else to do but obey. The outlaws growled throatily as the falling metallic weapons made a clattering sound.

Gola cried out in hysterical delight, tinged with a film of fear: "Master!"

Charles said quietly: "You come in good time."

Carlos let his cold eyes wander over the scene. His time-withered countenance was impassive. He made no gesture to release the bound captives. The mechanical voice grated metallically.

"We all seem to be here; every one. Three oligarchs from Yorrick, esteemed most highly by their city. Gola of Pisbor, of most inconsiderable worth to me." The poor ambassador cringed in his bonds; somehow he had failed in the dictator's eyes.

"Then we have with us Comrade Ahrens," continued Carlos with tapping fingers. "He is rumored to be the prime mover in a city of equality." The communist met impassivity with easy calmness. His features betrayed nothing.

"Not to speak of the jester," the strangely alert eyes strayed over him thoughtfully. "Curious; I must consider him later. For there are also a stray scum of outlaws, and—all twisted heads to the man in the red globe—"there is Redmask. A very dangerous outlaw, I was given to understand. I am interested in him and his silly mask. Of *penetron*, I believe?"

The red globe nodded without speech. The voice grated on without expression: "My secret; the secret of Pisbor. Take it off, that I may see what slave of mine set up to be the bad man of the Outlands."

The man shrank unsteadily away from the sound of the voice.

"Take it off, I say."

The outlaw who had cried out at the sight of Stephen now raised his voice eagerly.

"I have information for you,

Carlos. Spare my life and give me fitting reward, and it is yours."

Stephen turned slowly, saw for the first time the face of the recreant outlaw. Hard lines ridged themselves on his forehead. Clutching his violin tight, he poised on balanced feet for instant action.

"I make no conditions with any one," came from the dictator. "You shall give your information without terms."

"But my life at least," said the man despairingly.

"No terms," repeated the inexorable voice.

"I throw myself on your mercy!" cried the wretch. "I shall tell." His eye swung fleetingly around the groups. "That man—" His hand raised to point an accusing finger.

Stephen raised himself on the balls of his feet, ready for the last mad dash. But the accusation was never made, the gesture never completed. A green flash streaked across the cavern, an infinitesimal moment ahead of a puffed report. The outlaw gave a shrill scream; his body seemed to explode. Bits of flesh rained bodily through the cavern.

The jester exhaled slowly, settled back on his firm feet. His life had been saved by a miracle.

There was turmoil in the cavern, much shouting and seeking. The unhuman sounds of the dictator cut sharply across it: "Who killed that man?"

Silence. Then:

"I did," said Comrade Ahrens very calmly.

He twisted his bound hands; a Dongan projector appeared from under his blue shirt. The rounded nose pointed wickedly at the chaired figure of the dictator. Cries of alarm, weapons thrust up to cover the communist.

"No good," he declared contemptuously. "My finger lacks the tiniest pressure on the trigger. Shoot, and the finger contracts."

"Don't shoot," said the dictator. The seamed face twitched convulsively, the fingers trembled as they clicked out the voice.

Ahrens threw his head back and laughed. Then, surprisingly, he dropped the Dongan projector on the ground.

"It has no more shells."

Red color flooded Carlos—shame and rage equally mingled.

"You shall pay dearly for this," the mechanical voice droned.

"Perhaps," returned the communist indifferently, his eyes far away in thought.

Stephen and the outlaw chief had both been forgotten. Now it was Charles of the Marches who interrupted.

"Don't you think, Carlos," he inquired acidly, "it is time for you to release Janet and myself from these bonds? It is true the discussion is most interesting, but we'd much prefer to listen to it with untrammeled limbs."

THE DICTATOR LOOKED at Charles with speculative eyes, swung to Janet's fear-stricken body with a quickened glint. Edward, hitherto sullen and silent, strained against his bonds. The jester glanced swiftly at his time-signal, frowned, strained his ears to cup the tiniest sound, frowned more deeply, edged toward the passageway.

"No, Charles," said Carlos, "it is not yet time. You see, conditions have changed a bit. I had not intended in any event going through with the compact as stated. Once you and Janet were in Pisbor, you would not have gotten out without new terms."

The oligarch spoke quietly: "I anticipated that possibility. That was why I brought the battle fleet along."

"The fleet did not enter."

"Then the *Arethusa* would have remained outside also."

The dictator nodded his head in admiration. "You are clever, Charles, cleverer than young hot-headed Edward who stuck the *Arethusa* into the trap. I begin to feel that Redmask did me a service by kidnaping you. As it is, I have the *Arethusa* and its very valuable cargo—radium is the one thing we lack and cannot make synthetically. I have Janet just the same, and I have you without strings or disgusting talk of broken faith."

"You see, Charles, Yorrick declared war on me when I refused to let the *Arethusa* out. A scout plane of mine, spying on Chico, saw Redmask's ship materialize, and notified me. Now I shall dictate terms to all of you. First, Edward of the Hudsuns must die. I am certain he attempts to rival me in the affections of dear Janet, and that is not permitted. Amu!"

A Pisbor man stepped forward.

"Shoot him."

The conite disruptor whipped up. Janet shrilled: "Let him live, Carlos. I'll do anything—anything—" Her voice trailed, and she sagged against her bonds. She had fainted. Edward stared proudly at onrushing death, eyes unafraid.

Stephen strained his ears, heard something, a faint, far-off sound. Too late, he reflected bitterly. Edward would die. He must do something. Acting suddenly, he let out a great shout, spun on his heels, and dived for the passageway.

Amu's finger hung nervelessly on the trigger. He whirled to see what had happened.

"Stop the jester," said the dictator. "He must not escape."

Disruptors whipped red flashes across the cavern, dematerializing huge segments of rock. Stephen zigzagged as he ran. One touch of a flash, no matter how glancing, meant instant death. Feet pounded after him; the aim of the startled guards was improving. He made the passageway, darted along. He would never get out unaided. He could hear the swift rush behind; whole sections of wall disintegrated in front, to one side, behind.

Another sound came to him, the noise of more pounding feet. Was he trapped or was it—

He ran recklessly on. He would see soon enough. At the last bend before the lift-platform a swarm of men eddied round the curve. Men in the outlaw green, men with weapons thrusting forward. A shout sprang up from them at the sight of the jester.

Stephen gasped convulsively: "Men of Pisbor; kill them. Seize those in cavern—alive."

Their leader, a blue-nosed individual, nodded, and a surge of men eager for battle carried them around the jester in the twinkling of an eye. The last of the rushing men thrust something in the democrat's free hand.

He leaned weakly against the cold rock, quieting down laborious pantings. Behind him there was the noise of sudden shock, of fierce shouts and screaming agony, of the hurtling press of men in deadly conflict. The passage filled with acrid fumes, with blinding sooty flashes, with the terrible dust of disintegration.

Stephen went swiftly into the platform chamber, hid his violin in a wall niche, made certain adjustments.

VI.

A TALL MAN, broad-shouldered, stepped quietly into the great cavern. His head was completely inclosed in a blood-red globe; his step was sure-footed and certain. Within, the invaders were in complete control. Men of Pisbor, men in outlaw green, lay sprawled over the smooth rock floor, never to move again. Weapons of the fifty-fifth century never wounded—contact always meant death.

The dictator had been unceremoniously jerked out of his chair. He lay dumbly mouthing on the ground. His ancient face was a twisted mask of rage and fear. The survivors of Pisbor were herded to one side, the first group of men in outlaw green sullenly to the other. The bound captives were still in their bonds, overwhelmed with the varying changes of fortune that seemed to sink them each time deeper into hopelessness.

A sudden silence greeted the appearance of the orbéd figure. Then an ear-splitting shout of triumph from the massed invaders rang through the vault.

"Redmask!"

The dread name was caught up by the walls, rebounded and reechoed like rolling thunder. The figure nodded in acknowledgment, strode forward.

A simultaneous gasp issued from the captives' throats, a moan of terror from the beaten outlaws. A figure staggered in, tried to shrink from sight.

Edward gulped, his eyes moving unbelievably from figure to figure. Alike as two peas—two tall men clad in outlaw green, two globes of blood-red hue masking the features beneath.

Two Redmasks!

"For God's sake, which is which?" cried Charles, icy calm forgotten.

Gola stared and said nothing; Ahrens was mute.

Redmask spoke "Take off your helmet, impostor." His voice was hollow, bass.

The psuedo Redmask lifted trembling fingers, worked at the fastenings. The globe lifted, fell crashing to the floor. Revealed in the midst of his fellows stood a dark-browed man, blinking against the sudden light, features writ large with approaching doom.

Redmask stared quietly at him; his red orb terrifyingly impersonal.

"Do not fear," he said contemptuously. "You will not be harmed. You were only a tool." He turned to the man's fellows, the pseudo-outlaws. "Nor will you others."

The wretches burst into eager clattering of thanks. The impostor cried out: "I'll tell everything."

"You don't have to," Redmask remarked coldly. "I know everything. Charles of the Marches, I knew your plans. A case of overweening ambition. To join Yorrick and Pisbor together you would have sacrificed your daughter. You were certain you would be able, once united, to wrest control from Carlos."

Charles looked steadily at the dread figure.

"Your analysis is correct," he admitted.

Redmask turned from him with a gesture of annoyance.

"You, Gola," he stated, "are small fry, yet even you intrigued. You hated Carlos, your master, and aspired some day to overthrow him. You feared the proposed marriage, because alliance with Yorrick would have made your plans impossible."

Gola cowered in his bonds, making unintelligible noises. Redmask turned to the dumb dictator.

"The all-powerful Carlos seems but a poor thing without his chair. No voice, no strength; helpless like a snail parted from its shell. Your schemes were twisted, tortuous, like your ancientness. I am certain you boasted of them in your little moment of triumph."

Redmask swung from him. His voice gathered sweetness.

"Unbind Edward of the Hudsons and Janet of the Marches."

Outlaws sprang to do his bidding. Unhindered, Edward went to the terrified girl, put his arm protectingly around her.

"What will you do with us?" he demanded in challenging tones.

Redmask chuckled. It sounded hollow in the globe.

"A good deal. First, I shall ensure your marriage. Charles of the Marches will have to agree. That is the first of my conditions."

The oligarch bowed his head. "After what has happened, I consent to that. I say nothing of other conditions."

EDWARD GULPED in unbelieving wonder. His arms tightened around the girl. "Redmask," he said, "outlaw, outlander, thief, murderer, whatever you may be, know that you have gained a friend in Edward of the Hudsons."

Redmask chuckled again. "It is an honor." He turned to Comrade Ahrens, and a shadow seemed to fall over the shadowless light. His voice was grave, low-pitched now.

"You know what I have to say?"

The communist raised his head firmly. "I know. Human or devil, I know not which, somehow you have achieved the truth."

"Yes. It was you who planned everything. You feared the approaching marriage of state between Janet and Carlos. You knew it

spelled trouble for your city of Chico. The balance of power was about to be destroyed. The combination inevitably must attack Chico, seek suzerainty over the continent. You decided to forestall it. You planned exceedingly well. You arranged this cavern, dressed your men in outlaw costumes, fashioned a *penetron* mask for your man to impersonate me. It would be easy to throw complete blame on me. You managed to steal even the idea of the invisibility magnets from me. One of my trusted assistants was your spy. Where is he?"

Comrade Ahrens pointed to blobs of flesh spattered over the rock. "He tried to betray me, too, a while ago."

Redmask smiled quietly in the secrecy of his globe.

"I thought as much. Now tell me the rest. What did you intend doing with your captives?"

"I took a leaf out of the thoughts of these others. Chico never held plans of conquest, but what I learned made me decide to act quickly. It was a case of striking first or being overwhelmed. With these as hostages I hoped to compel Pisbor and Yorrick to remove their defensive walls, or, at least, to learn their secrets from my prisoners. Chico through me was to pretend to do likewise." He spoke with sudden earnestness. "Remember, this was my individual scheme. Chico knows nothing of all this."

Redmask nodded. "I believe you." He faced them all, voice suddenly stern: "Now I am laying my conditions down to you. On their fulfillment depends your lives. From you, Ahrens, I wish the return of the invisibility magnets, the *penetron* mask you fashioned, without, however, the uniway transparency that provides for sight."

The communist nodded his head in weary assent.

"From you, Carlos, the radium shipment of the *Arethusa*. From all of you—" There was a stir of listening. Charles set his teeth obstinately—"from all of you; that is, from Yorrick, from Pisbor, from Chico, food pellets enough to feed five million for five years. The outlands are short of supplies."

"That is a large order," said Charles slowly, "but—what else?"

"Nothing! Upon delivery to the points I indicate, all of you are free, free even to resume plotting against each other."

Incredulity lighted up their faces. "You mean—" began Charles.

"What I said," Redmask bit his words off sharply.

There was a rippling murmur of relief. The writhing dictator's toothless gums stopped mumbling.

"Of course we accept," said Charles as spokesman. "And I want to tell you—"

"Spare me your thanks. You can begin sending your orders to your respective cities now." Redmask said something to one of his lieutenants and disappeared quickly down the winding passageway.

Edward deposited Janet tenderly in a chair, went with purposeful strides toward the lieutenant.

"I wish to speak to Redmask—alone."

The outlaw looked him over with a quizzical grin, jerked his thumb toward the corridor. Edward hurried in.

He caught up with Redmask. The globed head turned and said: "Well?" in hollow tones.

Edward extended his hand. "Thanks— Stephen!"

Redmask stood quiet, then he grasped the oligarch's hand.

"So you've guessed the secret."

"Yes. Only a little while ago. You knew things only the jester could have known."

"You will keep the secret?"

Edward said simply: "I am an oligarch and a Hudson."

Strange, the pride of race of these men of Yorrick, thought Redmask.

"There is one thing, though," Edward continued. "That violin—"

Stephen laughed. "My most deadly weapon. You see, within the hollow frame is a tiny broadcasting unit. When I play, the melody is broadcast on directional beam to my headquarters. Each song is a code to transmit my orders."

"Clever! Another thing: what were you doing on the *Arethusa*?"

Stephen unfastened the globe, revealed blue, appraising eyes.

"I shouldn't answer that, but I will. I intended capturing the ship, to seize its cargo of radium. There was much I could have done with that cargo. Ahrens stole a march on me, forced me to change my plans."

VII.

THE CITY OF WASHEEN lay naked to the glittering sunlight. The fresh winds of heaven swept carelessly over its sprawling expanse. No impermeate dome hemmed it in; no space-warp shut it off from the outer world; no Web-ray shimmered over it suspiciously.

Why should Washeen have walls, protection? There was nothing of value in the city to attract the cupidity of the city-states; nothing that the others could not manufacture far more efficiently for themselves. Washeen was beneath even contempt. The very outlaws left it severely alone.

A great straggling city of individual houses, one- and two-story cubicles housing only a single fam-

ily each, surrounded by plots of ground on which the inhabitants, with fierce pride of personal possession, toiled and delved ceaselessly to extract food as nature made it.

Each family was self-sufficient, held ownership to unique belongings. A man's life belonged to himself, not to the community. He loved as he wished, married as he wished, conceived children as he wished, yea—even starved as he wished, with no one to say him nay. A most confusing community!

But now there was great trouble. The inhabitants were gathered in the huge central square—pale, emaciated, scarcely able to drag scurvy-tainted bodies and rickety bones to the meeting place.

William Cramner, their president—a nominal honor—was speaking. His white beard waggled, his voice was weak from hunger.

"We are doomed. There is not a cloud in the sky. The ground is baked to over-hardness; the crops are withered beyond help. It seems as though Washeen must vanish from the face of the earth we love."

His voice gathered strength. "Yet who dare say we should have done otherwise! Better to starve and die like free men, than have accepted the assured physical comforts of regimented slaves in the city-states. Better our bodies perish than our souls!"

A fierce murmur of assent swept the throng.

The president's worn face glowed, his kindling eyes swept the democrats. "No one," he thundered, "has tried to dodge his fate. No one has deserted for the fleshpots."

A voice cried out bitterly: "One has! Stephen Halleck!"

The president bowed his head in sadness. "Let that name be anathema. Let it be forgotten."

Some one shouted suddenly: "Look!"

All eyes turned upward. The city sprang up in alarm. A fleet of swift ships was swinging down the airway, was landing on the edge of the Outlands not far away. Such a thing had not happened in the memory of man.

Men swarmed out of the motionless ships, were vomiting huge gleaming tanks upon the matted ground. The pile grew higher and higher as they worked with feverish haste.

"This is indeed curious," observed the president with great dignity. "I shall investigate."

Supporting himself on his stick, he made his way through his people, approached the scene of strange activity. All the city fell in behind, hunger pangs momentarily stilled. They were not afraid; there was nothing left for them to fear.

The toiling men saw the outpour-

ing, redoubled their activities. The pile of tanks grew mountainous. The last one tossed out. The men sprang into the bowels of the vessels, the ports slid to. At once the fleet lifted, became vanishing specks against the trees of the Outlands.

The people thronged about the strange gleaming tanks. A man, bolder than the rest, seized a stone, beat on the top of the nearest one. He pulled out a handful of white smooth pellets. He was a youngster, unused to the outer world.

"What are they?" he asked.

The president was an old man; he knew. He fell on his knees in a great wave of thankfulness.

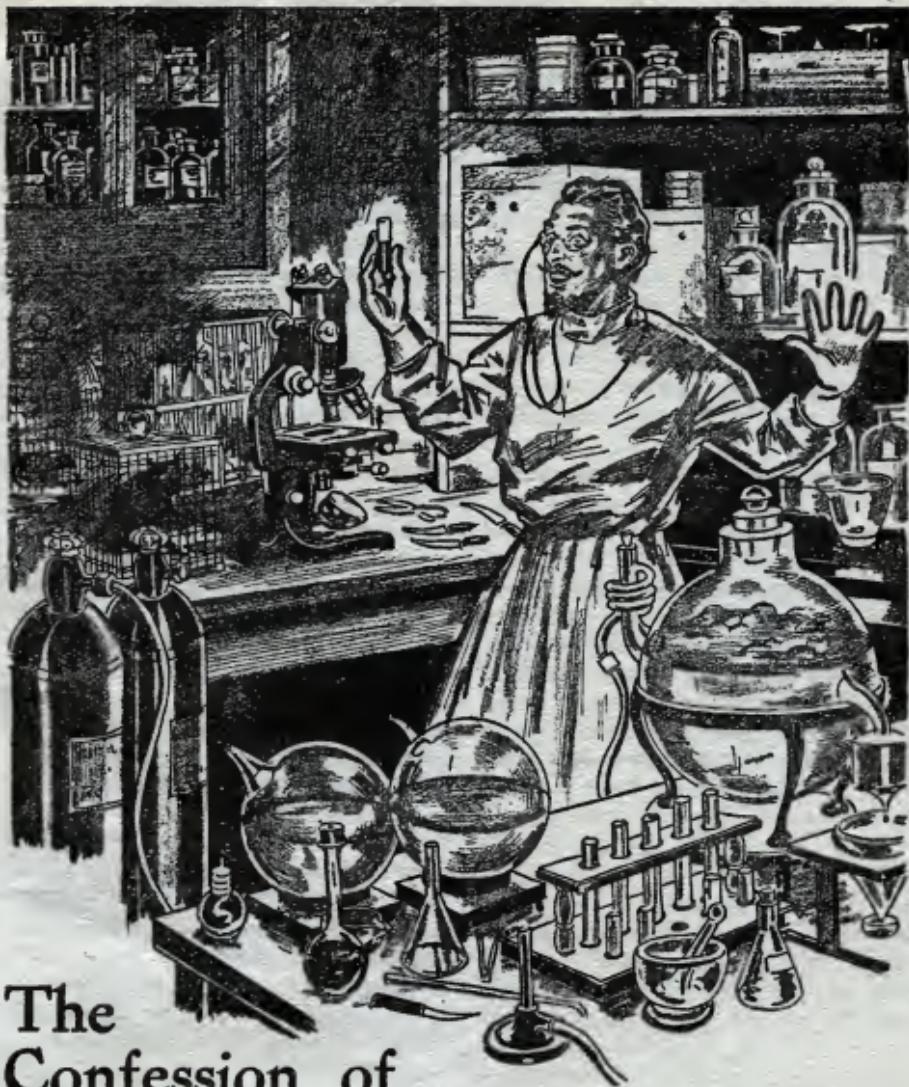
"Food! Synthetic food of the city-states. Food enough for all of us for years. Washeen is saved—saved! Next year our crops will come in again, but never again need we fear cold or rain or drought or fire. May the name of our unknown benefactor be forever blessed!"

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The Confession of by Stanton A. Coblentz

Dr. DeKalb

THERE ARE NOT many men who, having seen their life's ambition fulfilled, must stand helplessly by while triumph gives place to defeat. There are even fewer who have risen so high and fallen so sharply as have I, Reginald

de Kalb, at one time the central figure in the world's eye and at present a target of opprobrium and hatred.

Now that the good year 2050 is at hand, I recall only too vividly the enthusiasm with which we greeted

the opening of the century. Then I was a young man of thirty; to-day I am approaching fourscore years; and, feeling infirmity stealing upon me, I have yielded to the importunities of my friends and decided to make my confession before it is too late.

In many ways, there is little for me to confess. If I am not the redeeming angel that jubilant millions once thought me, neither am I the scourging demon that my foes depicted. Above all else, I was a scientist striving in my own way toward the light, and if I have failed it is because, with my human imperfections, I was not equal to the task before me.

At the age of twenty, I was one of those youths who had what he might have called "a mission to perform." My inclinations ran in the direction of the natural sciences; I had given myself heart and soul to the study of biology; and it had early come upon me that I was destined to make some world-shaking discovery.

I did not, however, confine myself to mere daydreaming. When I was barely out of my teens I was working at a project which was to occupy me for ten years, and which was to represent the hope and the humiliation of my life. In the course of my medical studies—it having been my object to become a physician—I had been informed of a series of curious investigations conducted by the endocrinologists of the mid-twentieth century.

We of to-day, of course, recognize the importance of the glands in the functioning of the human system; but we do not go so far as did our predecessors, some of whom believed that glandular treatments could transform the personality, giving a tigerish man the disposition of a sheep, or vice-versa.

Much attention, I recall, was devoted to the growth and nourishment of glands, as well as to operations upon them, and almost every ailment from insanity to senile decay was declared to be susceptible to glandular alleviation.

These notions, quaint as they may seem, took a powerful hold upon my imagination. Not that I believed that our fathers did not pay an exaggerated tribute to the glands. But the idea underlying their researches struck me as sound; why, indeed, could we not seek some way of altering the personality at will?

Why not find methods of eradicating vicious traits? Why not strike out imbecility and narrow-mindedness, cruelty and greed, treachery, covetousness, and sloth? Why not cultivate traits of broad-mindedness, generosity, altruism, and love?

Here, certainly, was an ideal to aim for! With the aid of science, one might revolutionize mankind more strikingly in one generation than all the philosophers and social reformers had done in three thousand years.

I was aware, to be sure, of the efforts in that direction being made by the apostles of eugenics; but their progress seemed much too slow to me; with the impatience of youth, I wished the change to come almost overnight! The endocrinologists appeared to me to be more nearly on the right track; and though I realized that I must experiment with something other than glands, the obvious suggestion came to me quickly enough. Why not study the nervous system?

Far more than upon his glands, man is dependent upon the network of nerves that threads his system somewhat as electric wires thread a city. If these are tampered with,

the effect is immediate: agitate a nerve, and a man will tingle with pleasure or cry out in pain; destroy a nerve, and partial paralysis or suspension of certain bodily functions will result; while a severe jarring of the nervous system will incur violent mental and emotional disturbances and even insanity. Does it not seem to follow, therefore, that by transforming the nerves one may metamorphose the man himself?

So I reasoned; and, with this thought in mind, I set about to find some means of shaping the nervous system so as to mold and build character.

NOW THAT I LOOK back upon my youthful ambitions, ten years seem a short time for the consummation of my task. Fifty years would not have been too much; yet ten years was all that was required—ten years of incessant strain and toil and ceaseless experimentation with rabbits and guinea pigs, with poisons and anæsthetics, with new fumes for inhalation, with powders to be swallowed, and with fluids for hypodermic injections.

In the beginning, as one might have expected, I met with no success; when five years had passed, I was not much nearer my goal than at the start; when seven years had gone by, I began to rake my hair futilely, and to inquire whether I was not throwing my life away.

True, I had seemed to secure some temporary results, but none that lasted more than a few days, and none that seemed worth a fraction of the effort expended. The nervous system even of a mouse appeared as well fortified against my attacks as armor plate.

I was almost in despair by the time I had been launched upon the right road. At the beginning of the

eighth year I found that a new form of spinal anæsthetic, made according to a secret formula, would produce a temporary paralysis that seemed to leave permanent results.

I first observed the effect during an experiment with animals: a bulldog, of the obstinate disposition of its kind, had been made meek and yielding as a poodle. How had the change been produced? I did not know. But I was encouraged. And I continued my experiment, with the result that a poodle, subjected to the anæsthetic, assumed all the growling pugnacity of the bulldog.

Here, at all events, was food for thought, though also food for bewilderment—why had such contradictory changes occurred? And how would it be possible to control the new drug?

Had I but realized it, my goal would now have been attained. The new spinal anæsthetic ("hypomatin," as I called it), would actually accomplish all that I desired; the one limitation was that I had not yet learned how to use it. But the next two or three years were to instruct me. It was not through deliberate planning that I made the culminating discovery; neither was it by chance, since any one who observed and experimented as much as I did must sooner or later have hit upon the truth.

On one occasion I noted that a dog, subjected to hypomatin at a time when his fellows engaged in an orgy of snarling and fighting, emerged from the experiment with a surly, growling nature he had not displayed before. On another occasion I found that a vagrant tomcat, who had always regarded human beings aloofly and with suspicion, became friendly and ingratiating as a kitten after being stroked and fondled while under the effects

of the anæsthetic. Even so, it was not until such cases had multiplied that I put two and two together and reached the inevitable conclusion.

An animal under the influence of the anæsthetic was as susceptible to fresh impressions as a newborn child. More susceptible—it was as though all its life experiences had been stamped out, and in their place the experiences undergone while under the anæsthetic had predominated. If, during the brief periods of anæsthesia, the creature observed examples of kindness, its nature would become kindly; if examples of cruelty, its nature would become cruel; and so on throughout the list of all conceivable attributes.

Nor was this mere imagination on my part. Time after time experiments confirmed my original observations; and I found that, by deliberate planning, I could produce at will any desired effect in an animal, obliterating inborn qualities until hares would become bold as lions and lions as timid as hares, wolves peaceful as lambs and lambs predatory as wolves.

What was the cause of such changes? In the beginning, I was bewildered and baffled; but by degrees the one possible explanation occurred to me: The anæsthetic had done more than to produce momentary unconsciousness; it had left the brain temporarily in a state of such blankness that any impressions from without would be stamped upon it indelibly, as upon a bare sheet of paper, thus reforming the personality.

If previous aptitudes and inclinations remained, they became latent and were relegated to the subconsciousness; so that, for all practical purposes, all that endured were the newborn qualities.

Since such changes could be pro-

duced in animals, equally great or greater transformations could be wrought in men—that much was apparent even without experimentation. Yet I was not content without experimentation. How secure subjects for my researches? That was the question.

The one method that occurred to me was to advertise; by means of the newspapers, I offered promising rewards to all who would subject themselves to the tests, and so, before long, I had a choice of dozens of applicants. From these I made my pick carefully, taking those who seemed most susceptible to improvement. Through exacting questions and observations, I determined what changes they wished to see in themselves, and those changes I at once set about to produce.

The results were unbelievable. One man, who had never sung a note, was made into a devotee of music through being submitted to orchestral strains while his senses slumbered beneath the anæsthetic. Another man, whose dissipated features proclaimed him to be a roué, became as moral as a monk after absorbing the anæsthetic in the atmosphere of a cloister; still another abandoned a life of thievery in favor of philanthropic work; others, again, exchanged hatred for love, or listlessness for ambition, or a wolf-like aggressiveness for the gentleness of the dove.

And so at last my goal had been attained. At last I was able to change human nature at will. What magnificent hopes, what unlimited vistas of advancement this offered! My invention, if properly used, would remove all baseness, all meanness, all mediocrity from the earth! It would bring about the day of universal genius, the day of the superman.

WITH THIS THOUGHT in mind, I lost no time about giving the invention to the world. I realized that I was bestowing an Aladdin's lamp with power to transform the future; yet, with a naïveté almost unbelievable to me to-day, I did not pause to inquire whether the genie of the lamp would obey any save the virtuous or the wise. I had no hesitations; I broadcast my discovery; I established clinics where all who desired might know the benefits of hypomatrin. I received the congratulations of my fellow scientists, the acclaim of the world, and I had the joy of knowing that the eyes of all men were focused upon me and that the activities of millions were being shaped by my invention.

That joy was to be short-lived. Had I had the foresight, I would have known that it must be short-lived. To-day, looking back in the light of tormenting experience, I realize that the world was not prepared for my discovery; that any transformation so revolutionary should not have been introduced in a day, but should have been attempted gradually and with utmost caution, while the world had the chance to prepare itself throughout many years.

However, it is useless for me to lament; useless to try to explain. It will suffice to outline briefly that course of events which, while seeming natural enough to us to-day, was then as little expected as communication with Mars.

One of the unfortunate features of my invention was that it was cheap as well as easy to apply. A second unlucky feature—and one of equal importance—was that, being still youthful and eager to reform the world, I was willing to permit its use virtually free of charge and without restrictions. Would that

I had been more gifted as a social philosopher! But I had not yet learned to distrust the judgment of the majority; and, what was worse, the majority had at first no suspicion that I was putting a tool more dangerous than dynamite into their hands. Hence no public measures were taken to curb the menace.

Most fatal of all was the rapidity with which my invention made itself popular. We all know how, now and then, some new craze or fad takes hold of the masses, and how millions are simultaneously swept by enthusiasm for some new means of amusement or self-improvement.

So it was with hypomatrin. Within a few weeks of the establishment of the first clinic, my anæsthetic had become widely fashionable; within a few weeks, it was as stylish to change one's character as to discard last year's coat. Indeed, all who did not profess an ambition for a new character came to be regarded as "back numbers" and "enemies of progress." One would hear neighbors shouting at one another across the back fences:

"Oh, yes, I'm to get my new disposition next Monday! Why, of course, I think I'll turn artistic! I always did just long to be able to paint!"

Or riding down town in the subway, one would chance to catch two business men in conversation.

"What's that? Going in for a sporting personality? Not a bad thing! Not bad at all! Personally, though, I've a leaning toward the stage. It must be great to know how to act."

Or, again, at any chance social gathering, one would find the conversation turning toward hypomatrin. The hostess, a portly old lady, would perhaps admit that she was about to

fulfill a lifelong urge to become an æsthetic dancer; the host, a mild-looking little straw of a man, might impart that at last he was to gratify his boyhood craving for exploration; the blushing young daughter of the family might confess that she was to be a wizard of high finance; the young, sheepish-faced son might declare his intentions of rivaling Milton or Shakespeare; while the remaining guests would express inclinations ranging from large-scale salesmanship to the lordship of society, and from pugilism to grand opera.

Owing to the widespread popular interest, the hypomatrin clinics were overwhelmed with patronage. They were unable to cope with the swarms of applicants; their waiting lists were numbered first by the scores, then by the hundreds, then by the thousands; it began to be perceived that the swarms of clients could not be treated for many weeks to come, or possibly for many months; while the opening of new clinics scarcely seemed to relieve the pressure, since the greater the numbers that tried the hypomatrin treatment the greater the numbers that desired to try it.

For those that made the experiment were invariably enthusiastic about the results; they reported unanimously that they had been subjected neither to inconvenience nor to pain, and that the requested transformations had been effected almost as if by magic.

At first there was little indication of the ultimate effect. There were, to be sure, a few critics who had dissented from the beginning, but these were mere voices in the wilderness; there was also the occasional despairing plaint of one who cried, "I do not recognize my John any more!" or, "I do not recognize my

Mary since her change in character!" But sensible people in general paid little attention to such wailings, and the prevailing point of view was that a Utopia lay just out of sight.

So, indeed, I myself believed, though it is one of the points of my confession that I did not employ hypomatrin to alter my own character. Perhaps, had I done so, I would have been able to perceive the real direction we were taking; but, with a youthful egotism, I never paused to reflect that possibly my own personality or perceptions were in need of improvement.

This was particularly unfortunate since, had I but acquired a little more insight, I might have been able to check the forces of disaster.

IT WAS NEARLY A YEAR before the first signs of the approaching disturbance were observed. Then gradually complaints began to arise that there was an overcrowding in certain fields not overcrowded before; while other and equally important fields were becoming deserted. It was noted, for example, that there was a sudden and unprecedented abundance of baseball players of the "Babe Ruth" order, so that the regular leagues could not accommodate them all, and most of them were making a public nuisance of themselves by knocking their home runs on the back lots.

It was also noted that accomplished acrobats, able actors, and talented singers were storming the doors of theatrical agencies in numbers never before known, so that managers and producers had to surround themselves with bodyguards. At the same time, mail carriers began to complain of the burden of bearing the manuscripts of newly arisen writers; while publishers and

magazine editors had to burn the midnight oil without making any noticeable dent in the increasing piles of manuscripts.

Simultaneously, business concerns were observing with alarm that their clerks were deserting in order to become musical composers or stars of vaudeville; factory managers were shouting vain appeals to check the drift of their employees toward science and the seven arts; hospital heads were becoming alarmed at the tendency of physicians and nurses to graduate into bond salesmanship and banking; the principals of schools and colleges were making an effort to restrain their teaching staffs from the allurement of the concert stage, the cabaret, and the dance hall; ministers of leading congregations were startling their flocks by finding that their real calling was in the domain of the night club; bootleggers were becoming politicians, politicians were becoming scholars, scholars were becoming farmers, farmers were becoming captains of industry, and captains of industry were deserting their desks to become professional golfers. All in all, during that first year of hypomatrin, we witnessed the greatest and strangest labor "turn-over" ever known to history.

But we were still able to observe events with indulgent and even laughing eyes. It was to take another year or two to convince us that there was something more than comic in the fact that competent poets were becoming common as house flies, while any street laborer might be expected to sing in a voice like Caruso's. It required, indeed, the severest financial panic in history to bring the dazzled world to its senses.

For some time, of course, we had been hearing of the prevalence of

unemployment; but this was an old, old cry that had been dinned into our ears for years and years, and few of us paid any especial attention. There was a peculiar fact, however, about the present wave of unemployment; the world was filled with tens of millions of competent artists, skilled virtuosos and professional athletes who could not hope to find any occupation.

At the same time, there were various other employments that were virtually deserted; street sweepers and bricklayers were worth their weight in gold; farm hands were so valuable that they had to be protected by machine guns; mechanics and factory workers could demand their own salaries and were escorted to and from work by chauffeurs in elegant private cars. And as for elevator boys, porters, janitors, and members of other humble but necessary professions—they had suddenly become extinct as the Tyrannosaurus.

This might all have been very well, had enough individuals remained to produce and distribute our food, to run our machines, and to keep the mechanism of civilization in working order. But, alas, that is where the users of hypomatrin most signally failed to face reality. The time came when it was discovered that our farms and factories were lying idle, and that the available surplus of food and manufactured articles was in danger of being soon exhausted. Then what a tumult ensued!

How swiftly and mightily the prices of all commodities rose! How many persons were driven to starvation! How many, homeless, were forced to roam the streets like gypsies! What sickness and disease, what thievery and unmentionable crime, what wailing and despair

became common on the streets of all cities!

With bread at fifty cents a pound, and the price rising; with milk at a dollar a quart, vegetables virtually unprocurable, and meat selling by the ounce when it was sold at all, the United States and all the countries of the civilized world found themselves plunged into the most devastating famine in history.

Not that some efforts were not made to avert disaster. At the beginning of the unprecedented rise in prices, frantic appeals poured forth to those who had changed their characters by means of hypomatin. "Change your characters back again! Former farm hands become farm hands once more! Former factory workers become factory workers! Fresh clinics have been established throughout the country to which you may resort free of charge! Use them without delay! This is your country's only salvation!"

But was it the country's only salvation? For while hundreds and thousands did allow themselves to be persuaded by the widespread appeals no less than by their own indigence and distress, they were to discover that it was not to be easy to undo the effects of the spinal anæsthetic.

IT WAS NOW that I was made aware of the one great, the one unforgivable blunder in my researches. I had been content to know that hypomatin would transform a man's character; it had never occurred to me to test whether it would restore an altered character to its original condition.

But, alas, here was the fatal flaw!

For some reason never satisfactorily explained, a man once subjected to the influence of hypomatin was like a man inoculated

against a particular disease; he was forever afterward immune against the attack of the anaesthetic, which had as little effect upon him as smallpox germs would have upon a vaccinated man.

This we learned, amid world-wide dismay, when one by one the hypomatin patients sought to revert to their original characters. Thousands upon thousands of individual tests were made, but in no case did we have the first glimmer of success! It was as if we had walked into a mighty trap, and found when too late that there was no exit.

We were caught!

I shall never be able to pardon myself for not discovering that hypomatin was a "one-way drug." Had I conducted the proper investigations at the proper time, we might have been able to avert the worst of the havoc of the horrible decades—the years from 2000 to 2040.

It is needless for me to describe in detail that era of catastrophe, which is only too well known to every reader; it is only necessary to state that, since man was unable to help himself, nature did her best to cure the damage by the rough and painful methods nature so frequently employs.

It is true that we did make some attempt at adaptation, and that, in the extremity of our despair, millions were to be seen in the most unexpected occupations; great poets were to be found digging ditches, and great scientists serving as truckmen, and great athletes hauling coal or stoking furnaces, while great statesmen were swinging picks in the mines.

But such desperate measures, though partly efficacious, were mere minor gestures that did little toward solving the major problem—which was that the world no longer con-

tained the workers necessary to produce the bare essentials of life. And so what was to be expected? Famine and pestilence; famine and pestilence; famine and pestilence time upon time; and with each recurrence of the disaster it seemed as if nature, with a mighty effort, were endeavoring to purge civilization of the surplus population.

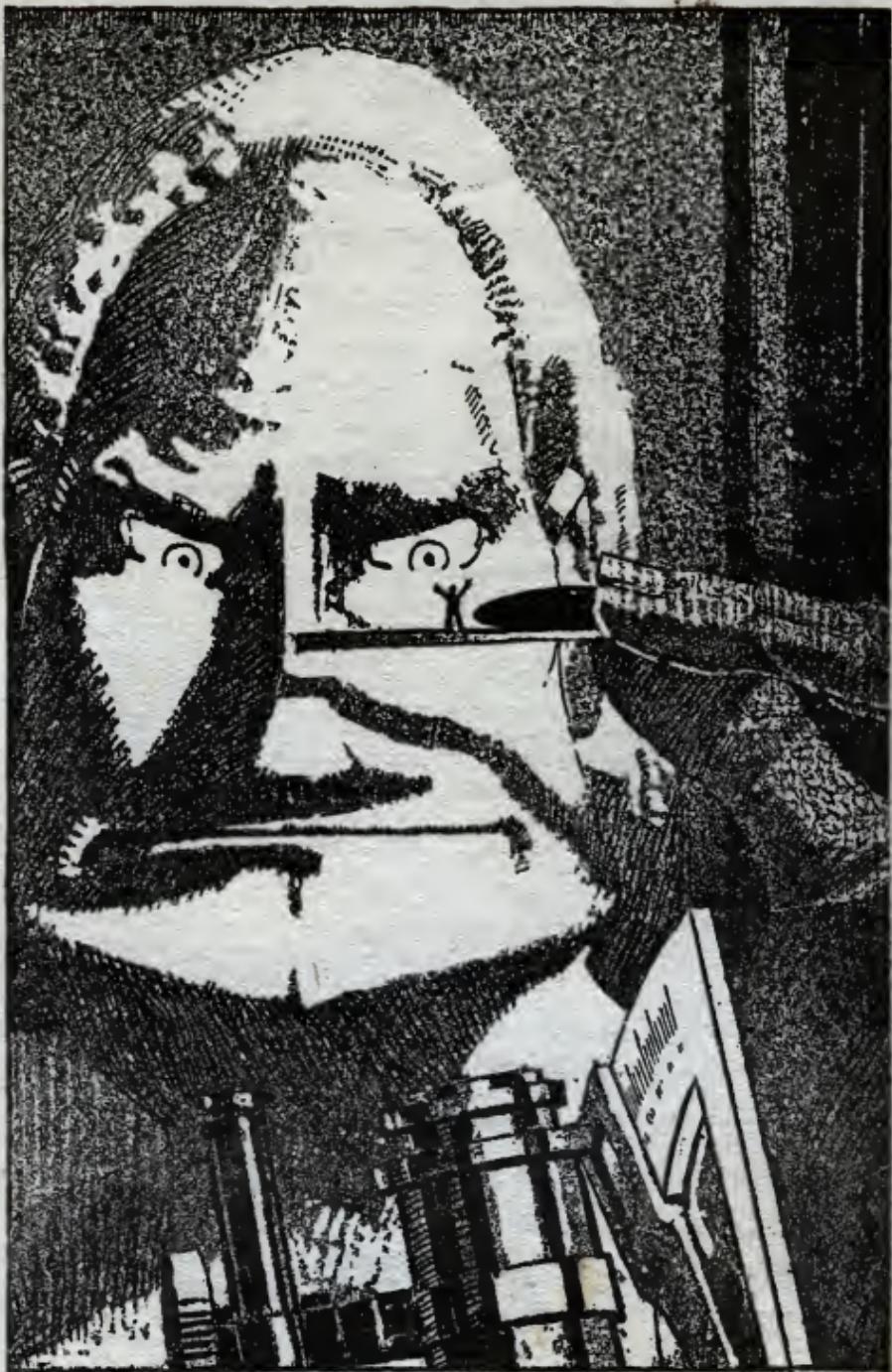
Not since the Black Death that depopulated Europe many centuries ago—indeed, not since the human race first stepped forth upon this planet—had such general suffering and misfortune been known. No one has been able to record how many millions perished each year of starvation and the plague, though we do know that those who had been subjected to hypomatrin seemed to have less tenacity of life than their fellows.

And so these were the ones that succumbed in the greatest numbers, going in their talented myriads—the genii of art and science no less than the mediocre—to a doom that their fellows had scarcely the time or chance to bewail.

Although the worst of the

calamity occurred during the first five years, it was not before forty years that a complete readjustment had been made, the last of the victims of hypomatrin had vanished, and civilization was able to regain its balance. And at that time, with four fifths of the world's population wiped out and the other fifth sobered and saddened by the long ordeal, we were able to signify the end of the reign of horror by an official ceremony in which the last remaining vial of hypomatrin and the paper containing the secret of its creation were weighted with lead and dropped to the bottom of the sea. The unhappy inventor, long an exile from society for a fault which he deplored no less than did his countrymen, would gladly have followed his invention to the depths of the ocean; but reluctantly he has decided to cling to life long enough to jot down these memoirs, which may make it known how the most baneful gift the world has ever received was devised with a brilliant scientific zest, and to the accompaniment of dreams of an earth remade and a humanity regenerated.

Controversial opinions make great reading in next month's "Brass Tacks." The department is growing as interest in the new ASTOUNDING STORIES grows—and the letters seem to agree that every issue is better than the last. Ask your news dealer to save you a copy.



"Titan! My death will not serve you! Spare me from the knife!"

COLOSSUS

*A Story with a Conception so Gigantic
It goes Beyond our farthest Calculations*

by Donald Wandrei

Illustrated by Howard V. Brown

"Their (certain astronomers) picture is the picture of an *expanding universe*. The supersystem of the galaxies is dispersing as a puff of smoke disperses. Sometimes I wonder whether there may not be a greater scale of existence of things, in which it *is no more than a puff of smoke*."—Sir Arthur Eddington, *The Expanding Universe*; Macmillan & Co., 1933.

LIKE A FLAME in the sky, the golden-red stratoplane circled Mount Everest and dipped toward its crest. Not so many years ago, that peak had been unclimbed, almost unknown, a challenge to man. Wintry gales tore across this top of the world, and cold rivaled precipices to defeat assault. The bitter winds still blew, but a man-made tower rose higher than the old peak, and a landing field which was a triumph of engineering audacity and genius stretched over sheer space beside the tower.

The circling stratoplane landed and rolled to a stop. The man who climbed out—Duane Sharon—seemed distinctive even in his heavy flying clothes.

His hands were powerful. No one would have admired any single feature of his, the hair of casual brown, a weathered face, a nose far from classic, and eyes of gray that glittered or softened as occasion required. But the general effect was good. He had a kind of loose rhythm, and a genial personality.

He sauntered toward the great observatory of the WLAS—World League for the Advancement of Science. Fifteen years had been required to build and equip this observatory which had been planned as long ago as 1960.

Once inside the tower, he identified himself and tossed a cheery word to the guard before sauntering into the observation room.

Probably the 400-inch reflector of Mount Everest Observatory would never be surpassed. Man, on Earth, could go no further toward conquering the limitations of atmosphere, metals, and optics. Through this gigantic mirror, underlying a telescope in whose construction the efforts of dozens of great minds had been united for years to produce an instrument of unrivaled accuracy, intricacy, and range, equipped with every device desired by and known to astronomers, study of the universe had reached a climax.

A man of ascetic features was studying the reflector. His speculation must be idle, since the Sun had not set. Calculations and symbols, equations and reductions covered a blackboard near him. A sheaf of scribbled pages lay on a table beside a heap of photographs, charts, and books. Professor Dowell had his own quarters, but he usually worked in the observation room itself. Here the temperature always remained

constant, at thirty below zero, but special clothing warmed him and nonfrosting goggles permitted vision.

Dowell did not look up until Duane stood beside him. Even then, consciousness of another's presence was slow to dawn.

"Hello! Am I intruding?" Duane asked.

Dowell blinked. A far-away look in his eyes faded. "Not at all; I'm glad you came. Here, have a chair—sit down!"

"Thanks, but I've been sitting in a plane for the last hour. I'd rather stand around for a while. Anything new? What's on your mind?"

The astronomer motioned toward the calculations. "You remember when you were here the day before yesterday? And I showed you photographs we made of the thirty-first magnitude nebulae in the Orion group?"

"Of course! You said they marked a milepost in astronomy."

"Did I? Yes, yes; to be sure. Just to think that only eighteen magnitudes were visible until we built this telescope, and now there are thirty-one, while the known universe has been expanded to nearly a billion light-years."

"Don't!" protested Duane. "That's too much!"

The professor did not hear him. "I'm puzzled about a phenomenon of the thirty-second magnitude."

"What is it?"

"There is no thirty-second magnitude!"

Duane reflected, lit a cigarette. "That's very interesting," he remarked. "I don't understand."

Dowell fretted. "Neither do I. Several nights ago, we photographed nebulae of the thirty-first magnitude. According to Jeans' theory and Valma's equations of the expanding

universe, there should be nebulae up to about the fortieth magnitude."

"And there aren't?"

"Right."

"What's the reason?"

"I don't know. There are only two possible answers. Either Valma made an error, which is inconceivable, or our whole theory of the universe is wrong."

Duane thought this over. "How?"

DOWELL paced back and forth nervously. "You know the three main theories of the universe, of course. There's the old one that space is limitless and extends forever in all directions. There is the theory elaborated by Einstein early this century, that space is affected with a curvature which makes it return upon itself. After Einstein, a group headed by Jeans advanced the idea of an expanding universe which might be said to create space as it expanded."

"Yes, I'm familiar with them and some others," Duane commented.

"No doubt. But nebulae and dark spots from the thirty-first to fortieth magnitudes do not exist, though they should. That may mean any of several possible explanations. Perhaps the universe has stopped expanding. Perhaps it is stationary, or even contracting now. Or if Einstein was right, perhaps the outer star-clusters have swerved through the curvature of space so that they are now approaching us instead of receding. That would account for the surprising number of aggregates in the twenty-ninth to thirty-first magnitudes. Possibly the oldest theory is correct, but some unknown set of factors prevents us from seeing galaxies beyond the thirty-first order. There are other possibilities."

"What's your guess?"

"I don't know," Dowell replied

querulously. "But there is a fourth alternative that has almost driven me mad just to think about."

"So? What's this one?"

Dowell polished his glasses. "I don't know whether I can explain it, the concept is so gigantic. Well, here goes: You are familiar with the atomic theories. Has it ever occurred to you that all the billions of stars that form all the millions of nebulæ and galaxies of our whole universe might be only the electrons of a superatom upon which vast beings might exist as we dwell upon the surface of Earth? That concept would explain the absence of nebulæ beyond the thirty-first magnitude.

"From there on would be an outer shell, or an invisible plane of energy and tension that incloses our universe but is substantial enough for beings to live on. There is no such thing as solid earth. The apparently solid matter we are standing on is, ultimately, atoms, electrons, vibration, with spaces between each particle comparatively as great as those between the stars and galaxies."

The voice of the astronomer trembled in presenting this tremendous theme. "Think what might happen if some one from Earth could burst through that superatom!"

Duane pondered. "It's a staggering conception. If you carry it out to its limit, that giant atom might be only one of billions of other atom-worlds on a scale we can't even begin to imagine, and all that super-universe forming—what?"

"A molecule! And there might be on that still vaster universe still more tremendous beings! And that molecule might be only one of billions of other molecules sown through trillions of trillions of light-years of space and forming even—"

"Don't!" Duane cried. "It's too big! I can hardly grasp it!"

He stared at the reflector. When sunset came, its vast disk would gather the light of stars from far places, light that had been traveling since land boiled out of steaming seas and formed continents on young Earth. Lights of infinity, the stars would record their being upon plates for men like Dowell to analyze.

IN THE OLD days, the prophets had looked at the night sky and bowed to God who made Earth the center of the universe of fixed stars. Then the scientists had come to prove that the Sun was the center only of a planetary system that moved in a universe. Then the astronomers had shown that a spiral haze in Andromeda was a galactic universe 800,000 light-years away, and that the whole Milky Way was only a galaxy among thousands.

So the roll of star-fields mounted, and the boundaries swept outward, and men's imaginations, roving afar, found new glory while the universe expanded and its depth staggered understanding. Beyond the stars lay nebulæ, gaseous and spiral and helical, with vast voids between; until by 1933, some 30,000,000 galaxies were identified in a range of 200,000,000 light-years; and by Duane's time, with the Mount Everest telescope, the range had risen to over 800,000,000 light-years, comprising 150,000,000 galaxies, each composed of millions of stars.

"Tell me," Dowell requested, "how is the *White Bird* coming along? Is she about ready? It was stupid of me to bore you with my guess-work."

"Don't mention it," Duane answered. "It wasn't dull. The mere idea of limitless space is as exciting as life itself. As for the *White*

Bird, she'll be done by October. The power-converters are being installed now. I think that a preliminary test can be made in September."

"I see. Perhaps you'll have the honor of informing us astronomers what the outer universe really is like!"

Duane retorted: "Long before then, you'll have worked out the one theory that my voyage will only prove to be true. I still wonder if the theory you mentioned a while ago could be right. And what would happen if the *White Bird* could carry us through?"

"If there were beings on that giant atom, they would never see you, so infinitesimal would you be. We have never seen an electron, let alone anything that might be on an electron. And you could never get there in a million lifetimes even at the speed of light."

"True," Duane answered thoughtfully, "but I haven't told you the whole story. The *White Bird* draws on intra-spatial emanations and radiations. It has unlimited power. It should be able to reach a maximum velocity of thousands of light-years, per second!"

"What!" shrilled Dowell, his face shining with excitement. "Do you realize what that means? You and the *White Bird* would extend in the direction of flight until you were as tenuous as a gas and elongated to thousands or even millions of times your first proportion! The ship would swell sidewise as well from the transverse energy-pull of the universe! You might become huger than Earth, or the solar system, or even our galaxy! You would be Colossus himself! And you would never realize any change because you would have nothing for comparison! Duane, if you do it, you may burst through to that giant

atom, and you would be visible to, and you could perceive, whatever was on it!"

Duane, overwhelmed, looked dreamy-eyed. "Vast concepts!" he murmured. "They're too much for my brain."

"Colossus!" Dowell half whispered, as though this vision, this apex of cosmic conjecture, dominated his mind and exerted a hypnotic fascination. "Colossus of time, space, and matter!"

"Even the mention of such a journey appalls me."

"I wish I could go with you."

"Nothing would please me better."

"I know, but if Anne is along—by the way, I suppose you would like to see Anne?"

Duane, the chain of cosmic theory broken, made gestures of mock depreciation, "Oh, my, no! Anne? Why, I merely came from America to make sure that Mount Everest was still standing."

"I like that!" A musical but at the moment sarcastic voice broke in. "So it's Mount Everest you're here to see and not me? Well, you can have Mount Everest." With truly feminine pique, the girl who had entered banged the door as she went out.

Anne was not a beauty in the sense of Mona Lisa or a movie star. She had above all animation of expression, clearness of thought, and more than average appeal. Her dynamic qualities were masculine wit, reason, energy, originality. Her aesthetic characteristics were feminine changeability, the figure of a patrician, Nordic features with mahogany-colored hair, a rhythmic stride and beauty of motion.

Probably she was most effective when annoyed as at present, for the triumph of emotion over reason lent her face a kind of hectic charm, and

she made a study of strength and weakness.

Duane turned to Dowell. "If you will excuse me, I'll try to make my peace. I—"

"Go right ahead!"

It took little time to find Anne. It required patience to pacify her. He need not have done so, but he found delight in playing up to her mood. The game of pursuit and the world of pretense would never change, however long Earth wore away to old age.

II.

THE HOLIDAYS of August drew to a close. September came in with a burst of riotous colors through forest and hills. Work on the *White Bird* came to an end. Professor Dowell knew of its imminent launching. So did Anne. The world did not. Duane figured that there would be ample time to tell the world after, of success or failure.

It was a windless evening whose chill approached frost when he and Anne stood beside the *White Bird* at Havenside, north of New York.

"Almost anything can happen," Duane said gravely. "The ship may not work, something might go wrong, or we might run into dangers beyond our knowledge. Do you know what you are letting yourself in for?"

Anne looked at him with slightly disgusted eyes. "I'm not a child. Forget this protective business. Let's go."

Duane sighed. Anne's realism was disconcerting.

The girl's eyes sparkled as she looked at the *White Bird*. "Only you could have built such a thing of beauty," she said and impulsively clung to Duane. She darted off as he made a futile grab and laughed at

him, teasing, "That wasn't an invitation, Duane!"

"The devil it wasn't!" Duane shouted in exasperation and dived after the fleet-footed girl. Breathless they came to the *White Bird's* entrance.

The ship lay long and low in the light of the full moon. It shone with a glow like phosphorus. A hundred feet in length, the cylinder, never more than ten feet thick, tapered to points. Crystalite composed its shell—crystalite, that strange element numbered ninety-nine. Invented by chemists, it had the transparency of glass, the color of platinum, and a higher tensile strength than any other metal, combined with a melting point above 6,000° C.

The *White Bird's* interior contained only essentials: a pilot room; a cabin; a supply room; and the front and rear power compartments. The torpedo looked bizarre, for its shell was transparent, but the inner walls dividing room from room were of vanachrome, that thin, rubbery steel which was virtually indestructible.

To look at the *White Bird* was to look into a house like a glass cylinder and see the rooms within, though, from within, no room could be seen from any other room.

"I'll never get over this funny arrangement," Anne remarked as they entered. "The whole world can look inside, but I have to walk from room to room to see what's there."

"Not a bad idea," Duane answered cheerfully. Anne's eyelids went down. Duane fidgeted. He suddenly stated, "Let's go!" and pushed a button.

The *White Bird* curved up from the ground like a real bird soaring after a dive.

"Oh!" exclaimed Anne. "You

should have warned me!" Her face sobered. The great adventure had begun. "Isn't it strange?" she asked in a very small voice and with very big eyes.

"It's a miracle," Duane answered. His fingers caressed the dials as he spoke. "Just to think that a simple condenser-transformer picks up cosmic radiations all around us, turns them to power and drives us on. Power by radio, more power than we could ever use, out of thin air!"

Anne emerged from her awe, but she seemed a different girl with more of the poetic about her. There was indeed a new luminous quality to her face while she took in the impressive spectacle of the skies.

The *White Bird*, at steadily mounting speed, passed beyond the stratosphere.

Above them, the sky darkened and blackened. Stars brightened to a brilliance that dazzled the eyes.

Then the Sun of the solar system became visible beyond Earth, and the light of the Sun and its reflected glare from Earth and Moon bathed the *White Bird* in a flood of radiance so bright that Duane and Anne donned goggles, and the craft's interior became perceptibly warmer in spite of the crystalite hull.

There was a glory to the skies, a spacious sweep, an infinite majesty of stars that ranged from brilliant white to faint and far-away orange, from pale blue to flame red and emerald green, which silenced the voyagers by its cosmic beauty.

IT WAS LONG before either traveler spoke, and steadily the *White Bird* fled outward, erasing the way to the Moon in ever faster time.

Anne broke the reverie. She waved her hand toward the universe. "If all this affects us so much," she

said simply, "what would we feel out there?" She pointed toward the faintest star, out where the spiral nebulae began in Andromeda.

"When I go there, perhaps I can answer then," Duane replied.

A dreamy look entered Anne's eyes, and they shone with an almost mystical fervor. "I have a queer idea, Duane. Maybe it wouldn't be so different from Earth. Back home, everything is related to something else. The same trees grow every spring. The same Sun rises and the days are always alike. Don't look so skeptical—you know what I mean. Of course they aren't the same trees, and the days are separated by time, and there aren't any two persons alike, but, just the same, nature repeats herself, and there seems to be some sort of pattern to everything, a pattern that unites everything and recurs again and again." She ended with a breathless rush of words.

"I think you're right," Duane mused, "but who knows? I don't. I don't suppose any one will ever know, unless he can go out there, where the stars end."

"Why don't we?" A hectic note heightened Anne's voice, and her cheeks flushed with excitement.

"Why don't we?" Duane echoed. "Why—I mentioned it to Professor Dowell and we joked about it, but I never really expected to go beyond the planets."

Mysterious raptures burned in Anne's eyes. "I wonder what's beyond the stars?"

That question which the wisest philosophers never have been able to answer, and the most learned astronomers have fretted in vain to solve, brought only reflective silence from Duane for a long period.

"I don't know," he said at last. "Professor Dowell thinks I might

break through and discover that our whole universe is just an atom, and that the great atom might be only one world among billions forming a still more gigantic molecule. Why, Anne, if he's right—"

Anne looked dazed. "What an idea! You'll go mad thinking about it. Why, it gives me the creeps!"

"I don't wonder!"

"I once took a course in biology. If we are essentially like matter, then electrons make atoms that form cells that compose organs which are part of a body. If that's so, Duane, and you got on to the giant atom-world, and could go still farther, you might eventually come out on a vast living organism of which Earth is merely part of a single cell."

"Now you're giving me the creeps! Don't think about it. The idea is maddening. It's all I can do just to picture the giant atom!"

Anne went on recklessly, with morbid mischief, "Darling, maybe some one like you on one of those invisible particles inside you is traveling outward now on a space ship and is going to burst through on a cell—"

"Anne!"

"—and you'll feel just a little twitch in your side, and maybe he'll keep on going and pop out of your brain finally and—"

Duane stopped this merciless and all-too-vivid description by the simple process of kissing Anne's inviting lips.

"Oh!" She broke away. "What a man! Is that all you think about?"

"Sure, when I'm with you!" he answered candidly; and then, serious again: "But don't forget, Anne, that the world is a powder mine right now. If war comes, all trips are off."

"War!" she blazed. "You would agree to murder and give up the pur-

suit of something that will mean more than all the wars in history? I will never love you for that!"

Duane kept a thoughtful silence.

VISIONS beyond infinity and past eternity changed gradually to speculation about the Moon, which loomed ever larger overhead. The buoyant feeling that Duane and Anne should have experienced as they drew away from the attraction of gravitation did not materialize, since the speed of the *White Bird* counteracted it.

The Moon swelled, cut off a fifteenth, a tenth, a fifth of the sky above. Their viewpoint modified. Instead of flying upward, they found themselves falling. The new perspectives of space gave rise to new experiences and unfamiliar sensations. They had been shooting upward from Earth. Now they were descending toward the Moon.

Duane cut off their power. The *White Bird* fell at furious speed. He turned on the forward repellers, unloosing upon the Moon's surface an invisible bombardment of energy that almost counterbalanced their speed.

The *White Bird* plunged less rapidly, slowed, and finally hung a few thousand feet above the Moon.

"Only Doré could have dreamed it!" exclaimed Anne.

Great craters pitted its surface. Masses of slag and lava flowed down the sides of extinct mountains, and fissures like the marks of giants' swords marred its lowlands.

Dead sea bottoms and barren continents alone suggested life of long ago; these, and certain clusters that might have been cities; masses of granite, blocks of marble and basalt, quartz, and silica, arranged in geometric formations. Were these ruinous heaps the remains of cities?

Had a civilization flourished here, of a race that had perished, leaving only its works to crumble beneath the everlasting encroachments of time? What legends and records, achievements and histories might lie beneath those shards?

Duane drew a deep breath. The answer would never be known to men. Great as the curiosity was that impelled him to study the riddles of the Moon, the dangers were greater, and greater still the goal of his dream. There was a mystery to all the universe. What lay beyond? Where would the end be, if one started off and traveled at random in any direction for as long as space lasted or life permitted?

"Let's land!" cried Anne. "Just imagine—walking on the Moon! And we can do it with your space suits!"

"Not now. We ought to be returning to Earth. There is little to be gained by landing, and a lot that we might lose."

Anne looked hurt. "All this way, all this trouble, and we don't find out what's on the Moon?"

Duane, exasperated, cursed inwardly this plague of woman's desire, this wish to exhaust the moment. Aloud, he answered: "We can always come. I've proved what I wanted—the *White Bird's* capacity. Let's head home. Our next trip will take us—well, wait and see."

"Where will we go?"

"Outside. Away to the end of things, whatever that may be. The *White Bird* can do it, and I'm going to where space ends. Whatever lies beyond the universe, empty and endless space or giant atom, I'll find—with you."

Anne's eyes shone. She held the breathless appearance of a mystic to whom a vision of glory comes.

The dream transfigured her face as she gazed at infinity and saw the far places. Sappho might have had so lovely and rapturous an aspect when she stood on a cliff of Lesbos and looked at the sweep of sky and wine-dark sea. Never before, and never again, did Anne's expression achieve such beauty. And Duane, as he watched her, absorbed something of her mood, that supernal wonder which the old philosophers and the great poets and the prophets have been gifted with.

Alexander, wishing for more worlds to conquer; Marco Polo, wending his way across lands of legend; Columbus, sailing upon unknown waters; Peary, assaulting the roof of the world; Lindbergh, winging through the skies—the ghosts of all the master explorers and travelers of the past haunted him, and he felt an invisible presence urging him on to that voyage for which history, and almost thought, had no counterpart. An exaltation of spirit possessed the two, and spontaneously they leaned together in unity of mood and vision.

"The way is homeward," said Duane at last.

"And outward," echoed Anne. She lifted her hazel eyes to his, and even he, well as he knew her, was startled by the unfathomable depths that they showed.

Almost regretfully, he sent the *White Bird* flying Earthward, and the crag-strewn, jagged, white ruin of the Moon's surface fell swiftly away, paled into softer outline, until once again, like a silver disk in the sky, it floated glowing and lovely and bathed in soft radiance. Then the majesty of stars and the procession of the Milky Way; and Earth looming larger. A buoyancy of spirit raised Duane to a peak of mental intoxication.

Here, in open space, he felt a sense of freedom such as he had never before known. Was it the nearness of Anne, whose mere presence influenced him strangely? His partial escape from the attraction of gravitation? Or a headiness that came inevitably from this preliminary voyage? He looked at the Moon and Earth, Sun and stars, the great void beyond, and then back to Anne. Anne's eyes were refreshing. Especially when they were as large and reliant as now. Duane parked her beside him on the way back. There was a mutual need for physical reality in the presence of space rampant.

III.

SEPTEMBER marched into October; and the maples vied with the oaks in colors of russet and tawny and flame. Earth throbbed with the activity that was industrializing Africa, tapping energy from the Gulf Stream, capitalizing power from the Sun. Socialized Russia in the eastern hemisphere stood powerful and defiant against the yellow menace that rolled over northern Asia. The proscribed United States, operating under dictatorship with industrial and capitalistic socialism, wealthier and stronger than ever before, with the unfit retired, the insane eliminated by euthanasia, and the criminal sterilized, surged on to dominance of the western world.

Economic rivalry in the new market of Africa created estrangement between England and the United States. The ugly undercurrents of competition and diplomatic folly were repeating themselves as in the World War. Russia and the United States against Japan and England seemed to be the coming line-up of Titans, with the rest of the world

involved in a holocaust that would undoubtedly mark the end of civilization.

Duane looked at a news sheet. "Japan Creates Secondary Militia of Women; British Claim New Germ That Kills Millions," ran the headlines.

"The world goes mad," he mused. "I only hope that all this slaughter will be over by the time I return."

For the remodeling of the *White Bird* went on swiftly. Adjustments of the delicate power controls to give the ship greater drive, corrections in its sensitive hull so that it might make the utmost of cosmic rays, gravity attractions, and atomic repulsions, correction of instruments to accuracy—these were changes that must be made before the *White Bird* could start upon that tremendous voyage to the end of the universe.

The work ran on, and the world raced ahead to disaster. The looming clouds of war grew blacker, and Duane fretted. What did the bickerings of mankind matter when so vast a project neared fruition?

October nineteenth. Mist opened the day at Havenside. By noon, a fine rain was falling, and the skies were solid gray. Duane roved restlessly around. To-night was the night of launching. The *White Bird* would set out to the ends of the universe, in an effort to solve one of the greatest riddles that confronted man—the mystery of space.

Twelve o'clock brought an ominous note. Duane, as always when he felt nervous, sat down at his light-piano and rippled off phrases of his favorites—a Bach fugue, the frantic monotone of Ravel's *Bolero*, Lecuona's wild *Malagueña*, a few bars from the *Peer Gynt* suite of Grieg. And while he played, upon a panel in front of him, wizardry of

supersonics transformed sound to light and color that wove a visible symphony.

Duane had reached an impressive passage from *The Hall of the Mountain King* when the televistor broke forth: "Count Katsu Irohibi, Minister of War for Japan, announced at 11:55 a. m. to-day that Japan was prepared to drop bombs of a new nature upon any part of the world by remote control unless Russian aggression in Central Asia ceased immediately, and unless the United States and England permitted her to compete with them in the development of Africa."

Duane felt a growing tightness. He anxiously wanted to fly immediately to Everest and bring Anne back, but she would not be ready until two, by which time Professor Dowell and she would have analyzed the previous night's photographs—their final effort to riddle the stars and uncover the secret of perplexing vacua beyond the thirty-first magnitude nebulae.

He rambled through sonatas and fugues, fragments of symphonies. The drizzle turned to a sodden downpour, and the oaks and poplars shook with sodden groans.

About twelve thirty, the televistor erupted: "Russia replied to Japan's ultimatum at 12:25 p. m., to the effect that she was not the aggressor, and that her territorial rights would be fully protected in Central Asia. The British and American governments simultaneously issued a re-declaration of African policy, denying the right of interference to any third party.

"Russia's defenses and offenses are already fully mobilized, as are Japan's, according to unconfirmed report. England is expected to issue a proclamation of national peril at any moment. John L. Caverhill,

dictator of America, will declare our position shortly, according to reports from Washington. The situation has grown tense. Analysts fear a recurrence of the World War upon a more serious scale. Every effort is being made to avoid armed conflict, but—" the voice droned on.

Prophetic clouds of war! Events were moving far too swiftly in a world of delicate economic adjustments. Duane turned away from the speaker's image and strode toward his stratoplane.

Rain beat upon him and ran in rapid trickles down the slicker he had donned, a sullen, heavy, steady rain splashing from skies of slate. Nations plunged toward disaster. Darker than any clouds loomed the threat of war. Mass murder might come by nightfall—and his dream would be ended. Duane had no illusions. If war came, he knew that he would plunge blindly in at the draught like millions of other pawns in the game of economic kings. He would serve for loyalty, patriotism, many reasons, but he would serve unwillingly because a greater goal lay at stake.

He climbed in his stratoplane, headed toward Tibet. Anne should be ready by the hour of his arrival. The voyage through infinity would begin at sunset—unless war intervened.

Skies of blue steel overhung Everest. The quarrels of nations seemed something alien and apart from this austere summit of Earth. The skyward pointing finger of the observatory rose like a timeless tower, a thing of perpetual beauty, a challenge above the assaults of weather and war, age and decay.

But the televistor gave pictures and words of ugly meaning: "War Minister Irohibi issued a proclamation at 1:10 interning all Russian

ships lying in Japanese ports. The order will remain in effect until Russia makes a satisfactory explanation and settlement for the mysterious explosion that wrecked the Japanese embassy in Stalingrad yesterday. It is reported that a great concentration of all Russian aircraft is now taking place outside of Stalingrad.

"Simultaneously, a second note was received at Washington demanding unrestricted colonization privileges for Japanese in the recently formed Anglo-American territory of Tanesia in Southeast Africa. The state department has made no official reply as yet; but a bulletin issued at noon to-day announced the perfection of a new instrument of war. Short-waves are sent by remote control to cause the collapse by vibration of buildings at any given spot. The situation is critical. Mobilization may be ordered by nightfall."

SUPPRESSING the anxiety and weariness he felt over this danger that loomed, Duane landed his ship and walked into the observatory.

Professor Dowell was striding back and forth irritably, his sandy mustache bristling. "War! War!" he choked. "They want me to work out formulae for the flight of projectiles! They want me to tell them just how to shoot at a point a thousand miles off and kill every one within a mile radius. Me? And there is work to be done on those!" He waved thin fingers toward the sky whose stars were hidden by day.

"I know; I'm worried, too. It looks like the end."

The astronomer raved: "They want to store munitions here! Make this a mere depot! This, the finest observatory ever built!"

Duane tried to soothe him. "War

has not been declared yet. Every one knows that it will be the end if it comes. It will be the last war and maybe the last of civilization. But where's Anne? I took out the license this morning. We're to be married at three, and I've advanced the take-off to three-ten."

The professor bristled in one of those swift changes of mood that make the individual both fantastic and human. "Running away, eh? On the eve of battle, as the historians would say?"

"No," Duane replied steadily. "I've got a goal. A tremendous goal. Something that may enrich man's life more than the last two thousand years. I have a mission. If I fail, what is one life lost? If I succeed, the rewards will be beyond guessing. If I stay here—what? Whether I am killed or not, nothing is gained. Therefore, I go. If that is cowardice, then I am glad to be a coward. If war is declared, I will serve. Frankly, I am trying to get started before war begins."

Dowell stalked around. "Madness, all is madness. Let war come. Science must push on. There may never be another opportunity to find out what lies at the end of the universe. Electrons and atoms. Giant atom universes in a vaster molecule." He paused and stared owlishly a long minute through thick glasses at Duane. "Go away!" he commanded. "I'm upset, I do not know what I say. Find Anne and take her with you, my blessings upon you both!" He snorted and trod about in nervous circles, weighing—who knows what?

Duane turned away from this spectacle of a fine mind sent askew by the forces of disaster.

Anne was laboring over photographs. She glanced up as he entered her workroom. "Hello!" she

greeted him. "I'm fine, thanks, even if you didn't ask."

"Now, Anne—"

"I know the rest. These photographs are more important. Nothing beyond thirty-one."

"Listen, lady—"

"And what's more—"

Anne never finished the sentence. She suddenly found herself picked up and carried out. She did not seem to mind.

"Hello!" exclaimed Professor Dowell, surprised. "And good-by!"

"See you when I return!" Duane called.

"Good luck!"

Duane deposited Anne in the cockpit beside him and headed homeward. She leaned back, stretched in a most unfeminine but natural fashion. "So we get married to-day?" she remarked casually.

"So it would seem, but don't let that bother you. You'll get over it and—"

The televiser cut in: "Emergency announcement! Japan declared war against Russia at two-five to-day. The Bank of England has just issued a call for the loan of one billion pounds by popular subscription. The department of war of the United States has evoked the compulsory clause of the war code of 1943. All males registered as voters are required to report at their district military station before sun-down."

Duane stepped up the speed of his stratoplane to the limit.

"That means—what?" Anne queried.

"The end," replied Duane grimly, "unless we leave sooner."

The stratoplane bored westward high above the Atlantic. New York City curved into view, a vague blur looking like some fantastic toy with its towers and megaliths, its set-

backs and hanging gardens and sky palaces showing as a sodden blur through the rain that still fell.

Duane headed north of the city and landed at Havenside. Standing beside the hangar that housed the *White Bird*, with rain pouring down his face and oilskins, he smiled at his bride-to-be. Casual though they had been thus far, he felt the stir of vast, sinister forces that menaced life, and felt, too, a surge of emotion that was novel.

A SMALL BLUE plane darted from leaden skies toward them. "That must be the official minister and the National Marriage Bureau's representative," Duane speculated.

Anne, looking suddenly flustered and with heightened color, decided: "Say, darling, I'll go straighten myself up a bit if you don't mind," and turned toward Duane's bungalow. "What a rotten day!" The steady downpour had soaked fields and trees, and pools gathered in every hollow.

A blast of sound, an explosion like thunder smote the air! The stratoplane's televiser crackled: "A terrific explosion has just occurred in New York City. The explosion was preceded by a shrill whine. It is believed that this is the unofficial opening of war. It will be recalled that Japan announced the possession of a new explosive that could be dropped in bomb form on any part of the globe by remote control. Stand by! A second whine has come—"

Out of the televiser came a roar that deafened. Then silence. And out of the south swept a second blast. Duane looked up. The blue plane rocked wildly in violent currents of air. Rushing winds caught it, flung it upward, sent it spinning to earth. Flames licked it up; the

wreck became a funeral pyre. The rain eddied in mad gusts.

Duane's face was gray. "It is war," he said coldly and swiftly. "Get anything you want. We're leaving now!"

Anne flung her arms around him like a child, her wet face pressed to his. She kissed him quickly and ran toward the house, after a promise, "I'll be right back—by the time you're ready."

Duane entered the hangar, and moved his space ship outside. Resting on automatic rolling supports, the *White Bird* glistened with silvery transparency. Her mechanism in the fore and aft compartments was of provocative design and strangeness. All possible essentials piled the supply room amidship. Behind it lay sleeping quarters. Controls occupied the room behind the fore power chamber. A door, so finely fitted that it was unnoticeable, supplied the only entrance midway between stem and tail.

Duane surveyed everything in a quick appraisal. The long streamlined hull, pointed at each end, passed his inspection. He waited anxiously, peered through mist and water toward his bungalow. He felt relieved when Anne appeared, running through the doorway.

Something screamed from afar. Duane paled. "Hurry!" he called.

A blast of flame roared up beyond his home, colossal gouts of soil and rock belched skyward, and his home flattened from a hurricane wind. Rain drove at him like needles. The explosion blew him down and swept the *White Bird* from her supports.

"Duane!"

That faint cry brought him out of his daze as nothing else could have. He staggered toward the spot where he had last seen Anne. He threw boards and planks aside with

incredible strength. The rain beat down, but the darker rain of débris ceased.

Somehow, he clawed and dug his way to Anne, all the while cursing fate and the gods of war who had mocked him. A great dead quiet overhung the world. Only the endless rain dripped while riven oaks and blasted bushes gave the dreary, sloshy sound of wet vegetation.

Anne was dying.

The realization of that fact was the most heartbreakng moment in his life. He stared dumbly at the face, lovely and white and calming, with whose repose would go half the driving desire of his life. And with that love lost, the trip became as nothing.

Anne's eyes opened tiredly. Her lips moved. "Go," she whispered. "I'll be with you, darling. Remember what I said when we were coming back from Everest a few weeks ago? There is no beginning or end to anything. All goes on and on, and so will you and I."

A moody look misted her eyes, they grew ghostly with something that only a mystic could interpret. If this were death, then death were ecstasy. The effort to speak exhausted her. Duane bent over as her lips moved, and her voice came to him from infinite distances with a last command, faint and barely audible: "Go!" Longing and love, peace and dreams, were in her eyes.

The embrace that she asked for, the kiss he gave, was the seal of death and the token that parted.

Beginning, and end. End, or beginning? The words danced a monotonous refrain in his thoughts when he raised himself and stared bitterly ahead, a queer, hurt look warping his expression, as though he tried to understand some simple fact that continued to elude him.

Why go? Where to? War ran a red smear around the globe. He would be needed. But war had taken Anne from him. Hatred of man and his savage works seethed through his mind, a crimson background to the black tapestry of his thoughts. Go—go—go—that was Anne's request.

In the distance, the eerie whine of radio projectiles shrilled anew. Earth shook with blasts and detonations. Fumes of acrid and pungent odor bit into his lungs.

The air itself was now becoming poisoned.

The glare of a great conflagration or explosion reddened the sky above New York City, turned the wall of rain into smoky scarlet. His mind was made up. He entered the *White Bird*.

The door closed behind him. Burned energy shot from the three rear projectors. The craft swooshed away and up in a great arc and disappeared like a ghost amid rain and gloom, while giant flashes of flame roared up where cities had stood.

IV.

THE SWEEP OF infinity, so impressive, so implicative of mysteries that mind never had solved, helped to relieve Duane of his misery. He would never forget, wholly; but there were splendor and cosmic riddles all around, and beyond the end—would there be another beginning? What lay out there, past the ultimate stars? Was Dowell correct, and did the circling stars represent only vibrating electrons of a giant atom? And if the extension and expansion of the *White Bird* took place as predicted, would Dowell follow his progress, watching him grow ever larger and dimmer as he sundered space, until he became in-

visible because of distance and attenuation?

Sunlight flooded the *White Bird*, and the Sun hung radiant and the Moon gleamed, but the skies were a blackness fretted with hordes of stars, not only above, but below, and in every direction; and the traveler felt again the overwhelming strangeness of things, the crushing magnitude of the universe, as Earth dropped away.

Go he must. All his dreams lay buried upon Earth. As if to symbolize his flight—or was it pursuit? —he stepped up the cosmic-ray power in successive jerks that hurled the *White Bird* at ever-accelerating velocity toward the constellation Cygnus. Any constellation would serve, but Cygnus, the Swan, was overhead when he burst from the air blanket of Earth, and toward Cygnus he shot.

Power he would never lack. Space was filled with more power than he could use. Light rays, cosmic rays, infra-red rays, radiations of countless kinds were all picked up by his driving mechanism, much as a radio picks up waves, and were transformed into energy that bombarded all matter lying behind his line of flight with a force that hurtled him forward. There was only a theoretical limit to the speed he could attain—whatever limit the nature of things imposed.

He had not yet, even in his experimental runs, tested the *White Bird's* capacity, but he knew that she could exceed the velocity of light. He knew, too, that a metamorphosis would occur when he passed the speed of light rays. According to the law propounded decades ago by Einstein, the *White Bird*, all its contents, and he himself would undergo a change, lengthening in the direction of



On—on toward the spiral nebula—and beyond, into the infinite.

flight. How great that extension would be depended upon the velocity itself.

He could estimate it in advance, but he could never realize it as an experience, simply because he could have nothing for comparison excepting the stars. And expansion would accompany that elongation; enlargement, to a degree beyond computation, along the planes of both the long and the short axes of the *White Bird*.

The planes of Saturn, Uranus, Neptune, and Pluto passed behind. Ahead lay a great void of four light-years until the myriad stars of the solar system's galaxy began with Alpha Centauri. The solar system diminished to a mere point. The bright illumination in the *White Bird* faded to a glow which was all that the stars provided. Duane did not turn on the interior lights. He preferred this shadowy and soft luminance.

There was nothing to do, little to calculate, nothing to expect until he approached his goal. The danger of collision remained ever present, but automatic safeguards could be depended upon to swing the *White Bird* around any important mass that loomed ahead. Later, at the ultimate enormous speed he hoped to attain, scarcely any mass smaller than the sun would disturb his cruiser. Its attenuation and expansion would be so great, its elongation and atomic separation so tremendous, that it would approximate the nature of a gas and literally pass through intervening bodies.

Stars paraded. Constellations swung behind. Cygnus vanished, the Big Dipper changed its outlines, the evening star became faint, Betelgeuse and Antares flamed away, second and third-brilliance suns loomed as bright as the old first-magnitude

stars. His speed pyramided. He achieved the velocity of light and outdid it. The *White Bird* swept onward with cyclonic fury. It tore outward in tens, hundreds, and thousands of times the speed of light.

It streamed beyond the eighth, ninth, and tenth-magnitude stars. Always its velocity increased. The man who watched the controls had a demon's set expression. He seemed to take a bitter pleasure in increasing the *White Bird's* velocity to a pitch that imagination itself could hardly grasp.

Eight hundred million light-years formed the distance to the farthest nebula. Even if he hurtled at a million times the rate of light, it would require eight hundred years for him to reach the outpost. Even at a light-year per second, more than twenty years would lapse before he achieved the goal. So he continued to draw on universal energy in a steady acceleration that ripped the *White Bird* through space at a blasting and frightful velocity now mounting toward dozens and hundreds of light-years per second.

Duane, exhausted, dropped into a dreamless slumber at some point of his journey. The automatic controls were set. Whether they worked he hardly cared. His accumulated hopes, tragedy, and undertaking of the day were above rational analysis.

The eternal procession continued. He wakened to find stars and suns hurtling past in linear streaks. All the heavens were strange. Not one body did he recognize. Star-point far ahead, streaks parallel with his plane, dwarfing maze of light flecks remotely to his rear—these were intangible realities.

Blackness deepened ahead. The

Milky Way and its spectacular infinitude of suns became as a dream. He bored out of this galaxy in a haze of vaporous extension, burst through eternal voids. Now space was a misty immensity where the nebulae, the island universes, sown afar on a lavish scale, rushed toward him out of the cosmic depth, with glow of birth and procession of star-field units, and blaze of youth and parade of creation. He was a star treader, a traveler who used the starry galaxies for fleet stepping points toward the outer blackness.

DAYS AND NIGHTS passed, but there were no days and nights, only the ceaseless gyration of stars, passing of constellations, traversing of nebulae and clusters and great gaseous patches, in whose center cosmic birth or death might be taking place.

The *White Bird's* speed still increased. That vast gap between the solar system and Alpha Centauri, a distance so enormous that light required four years to cross it, represented a fraction of a second at his present velocity. The fastest lens, the quickest eye, could not have seen his passing. The *White Bird* fled swifter than a dream, winged through infinity almost as instantly as the mind itself could think of the spaces outward.

A cyclone stood still compared to the *White Bird*. The flight of bullets, the flight of meteors, the flight of light, were snails in relation to him. He annihilated the far reaches of the universe at hundreds and thousands of light-years per second. A flash in infinity, a silvery bolt through the black, a ghost that was gone more quickly than the messengers of death, the *White Bird* bored the known universe, and went on.

Great constellations, Cygnus itself, which had loomed large ahead, had resolved themselves into streaks shooting by all around him, and had then faded behind to a cluster, a point, a mote, were now nothingness. He hurtled stars and clusters and nebulae, plunged wildly across voids, leaped infinitudes. His galaxy had utterly disappeared.

And all the while, according to theory, the *White Bird* underwent a transformation, became longer, stretched away farther and farther as the speed mounted, but Duane would never know, for he was part of that change.

The *White Bird* by Earth measurements must be hundreds, perhaps thousands, of miles in length, so attenuated as to be almost vaporous, so nebulous and distorted as to appear like a mist. According to calculation, he must also be annihilating time, for his whole relation to the cosmos had been profoundly altered, and what he perceived as a thousand miles was in reality a thousand light-years, and what seemed to him a second must actually be centuries of Earth time.

If Dowell were watching, he must have seen the *White Bird* become as a meteor, a vaporous fog, a gigantic haze, hurtling and expanding toward infinity, until it vanished, since it exceeded the speed of light, and light-rays from it would require hours or years to reach Dowell's reflector.

Now it mattered not whether he pierced suns or struck planets. Automatic controls veered the *White Bird*; but, in theory, at this frightful velocity, and with this vaporous extension, he should pass through apparent solids, much as air blows through a sponge. Power? All space held invisible power. He had not begun to tap the inexhaust-

ible store, but greater speed he feared to achieve lest the *White Bird* pass completely out of control.

The crystalite cruiser traversed voids and eons in moments. Nebulae of the twentieth magnitude streaked past. White suns and blue, pale-orange and apple-green stars, colossal tapestry of night blazing with eternal jewels, the procession approached and receded. Blackness deepened ahead. The hordes of star systems grew fewer. The spiral nebulae and the black gas clouds, the island universes and the chaoses of flaming birth decreased. He was nearing the end.

By only one comparison could he sense the change that was occurring. At first, the galaxies had seemed gigantic, flaming constellations and aggregates of billions of stars. Now they looked like dim and hazy disks of mist; and, by that diminution alone, Duane guessed that his extension and expansion had progressed on an unbelievable scale of magnitude. Had the *White Bird* surpassed in size the Earth or the solar system or even his galaxy? He would never accurately know, though he were Colossus beyond measurement.

What would he find? Some scientists held that the universe was expanding and that space was created with this expansion. What would happen if this were true, and if the *White Bird* at its present velocity passed beyond the limit? Other astronomers held that space was infinite in all directions. Must he go on till death overtook him while he tried to find an end when there was no end?

Still other prophets suggested that all the bodies of the universe might be only the myriad components of a superatom, beyond which lay a greater universe; and if these

proved true, would that superuniverse be only a stepping-stone, only a larger atom in a yet more gigantic cosmos? Where did the end lie? And if those speculative mathematicians were correct who thought that space was subject to a curvature which made it return to its beginnings—

DUANE'S HEAD ACHED. So vast the possibilities, and so limited his ability to understand! Life so short, and truth so hard to learn! And this the attempt to solve a problem above even the deepest inquiries of mind, exceeding the oldest attempts that thought had made to fathom!

"Thus far shall ye go, and no farther." A phrase from dimly remembered teachings drifted through his brain. "Seek, and ye shall find." What? He wondered. "Men are deceived in their conceits beneath the Moon, and have sought in vain for any patent from oblivion above the Sun!" So a mystic had said.

Who had guessed closest to truth? Dowell, with his theory about a giant atom-world composed of electronic vibrations represented by all the stars of all the galaxies of all the universe known to man? Einstein? Jeans? Or some obscure prophet? Duane shook his head as though to free it of oppressive weight. These were thoughts too complex and inconceivable for mortal mind, too dangerous for sanity.

Now the last stars shone close, and streaked by, and one emerald sun marked the outpost of space.

Remotely ahead came blackness, solid, absolute blackness. Behind lay Earth and Sun, stars and constellations, galaxies and star-fields, a hundred million strong, billions of billions of stars, trillions of trillions of miles, enormity compre-

hensible solely in terms of the stellar mathematics of astrophysics. The young emerald sun, flaming in the radiant beauty of birth, swirled by and became one with the billions of billions of stars behind. Duane looked back. There was a vast and dwindling conglomeration of points of light that receded to haze, to a vague luminousness, and that mysteriously was blotted out. The phenomenon puzzled him until he thought of one explanation—light rays had not yet penetrated thus far!

No loneliness, no fear of darkness, no feeling of utter helplessness in the grip of frightful forces and in the presence of far places and alien lands, no longing for the sweet companionship of Anne, such as now overwhelmed him, had ever before combined to appall in such magnitude any mortal creature. The blackness everywhere was solid, so complete that his eyes ached, and not one part of his ship could he discern, not one object, not even the hand that he held before his eyes.

A horror of that infinite blackness, that absolute void, gripped him, and he stumbled about with something akin to blind panic in an effort to find the interior-lighting controls. The glow comforted him, until he looked at his velocity dial. The speed of the *White Bird* was falling off swiftly!

Was this immensity so vacant that there were not even cosmic radiations to supply him with power? Or was some unknown but terrific drag slowing him down? Would the *White Bird* come to inertia and he to death in this black void? What forces prevailed here?

And what was the nature of that dim and shadowy glow, like a pale fog, that gradually appeared in place of a void blacker than coal?

Hope surged anew through the voyager, an uncontrollable excitement gripped him, he stared with painful intensity at the far-away mist. Had he followed a curvature of space and did he now approach his own universe? Had the *White Bird* leaped some titanic chasm to a new universe? Did he plunge toward that enormous atom imagined by Dowell? Was he now Colossus, exceeding man's deepest dream of giantism?

Colossal speculations of a colossal journey!

The mist drew closer. The *White Bird's* velocity fell to thousands, hundreds, and now only tens of light-years per second. Duane experienced a curious buoyancy and dizziness. He felt as if unfamiliar power and forces were gathering him in. Weakness overcame him. The play of foreign laws inclosed him. His sensations baffled analysis. His mind, governed still by Earth principles, could not understand what was happening. A whirling confusion as though his brain were an eddying mist enveloped him. Darkness and light divided his course. He sensed a shudder and a trembling of the *White Bird* as if it were a deep-sea creature caught in tides and forced toward the surface.

A shock followed by a violent jolt stunned him.

He had literally burst space.

V.

WHEN DUANE'S dazed faculties began to function again, it was with a feeling of the deepest awe that he stared around and tried to comprehend what had happened. Realization came slowly, and he found it difficult even to decipher his surroundings.

Light flooded his compartment, bright white light that was curiously restful and soothing to his eyes, unlike the glare of the Sun. The *White Bird* rested on a flat plain of what looked like glass, perhaps a hundred yards long and ten wide. Far below him he saw a second plain, mahogany-colored, which swept away in the distance, then stopped at a sheer cliff that fell an unknown distance down toward the blur of what seemed to be solid ground. From the second level rose two brasslike towers that supported the glassy oblong upon which the *White Bird* rested.

What did this mean?

He looked upward. What was that giant circle overhead?

He peered out. What were those colossal and serrated monuments that looked like the mechanism of giants and possessed eerie illusions of a four-dimensional geometry? What were those other massive bulks that towered toward the spaces above?

Understanding and fright paralyzed him in a flash of intuition.

The White Bird reposed on the slide of a microscope! The second plain was a table top, the third plain a floor. The geometric metallic mountains were apparatus and machines. The towering things were living beings. He had burst through the atom that was his universe and had emerged on a planet of a greater universe, a superuniverse!

The vastness and spaciousness around, the acres and leagues of ground, staggered him. Everything was on a giant scale to which it was hard for him to become accustomed. And yet it was not until he looked intently upward that the full magnitude of his surroundings impressed themselves upon him.

At what seemed the horizon, and

seen as through a light haze, beyond plains and mountains that were only tables and machinery, rose walls more towering than the peaks of the Himalayas or the cliffs of the Moon, walls that curved gigantically zenithward where lay an opening toward which pointed a monstrous tube whose length must have been miles.

Around this tube stood two of the alien beings, and at a table far to one side sat a third, and a fourth faced a complicated mass of blue-white metal apparatus whose nature was beyond conjecture, while a fifth leaned beside the great microscope.

Duane at long last understood completely. This vast region of bare surfaces and precipitous descents was only a single room, an observatory, and the beings were astronomers studying whatever skies lay above!

Still dazed by his pilgrimage, he experienced a new awe. Dowell had guessed the truth in his amazing theory! All the universe that he had traversed was only an atom, perhaps drifting in the air around him, perhaps part of the slide, perhaps the whole interior of this world. He would never know where, for it was as lost to him as the treasures of Atlantis. But that universe, with its scope and sweep and myriad components, formed only the least part of this sphere. There must be other worlds, an entire new universe of stars and suns and comets! And beyond these—what? His mind, numb from the exhaustion of mere speculation upon so stupendous a scale, turned wearily to the beings.

They were Titans. Compared to Duane, the Colossus of Rhodes was infinitely less than the tiniest particle of matter. Compared to the Titans, Duane stood as lowly as a worm!

Anthropomorphic in general appearance, they possessed both strikingly human characteristics and alien traits. They reminded Duane—but on how gigantic a size!—of the Easter Island sculptures, for these Titans had flat-backed heads, high, slanting foreheads, deep-set eyes, the noses of kings, and thin, ascetic lips above a jutting jaw. No race of conquerors ever before gave such an impression of strength, austerity, intelligence, and power.

Godlike, the incarnation of supremacy, these giants gained added impressiveness from the radiant texture of their skin, which was as clear and cold as the glint of ice or the sparkle of a blue-white diamond, and as smooth. Had some dim awareness of these entities filtered through the minds of the races of Earth and helped to develop the concept of deity? Were these the prototypes that served the sculptors of Easter Island?

Duane, moody and tired, longed for the companionship of Anne, for the presence of one human being to accompany him in this *Odyssey* that vanquished space, only to plunge him into the beginning of new mystery.

FAR, FAR OVERHEAD towered the Titans, league-long, massive creations overshadowing even the inhabitants of Brobdingnag. The reddish tunics that they wore formed a splash of color against the brightness of their Cyclopean bodies.

They were talking among themselves, the Earth man observed by the motion of their lips, and curiosity overcame fear. He stealthily opened the *White Bird's* door. A Titan, peering through the telescope, spoke. In the vast but clear resonance of that voice, Duane dis-

tinguished a syllable wholly foreign to the tongues of Earth. The Titan by the mechanisms pushed a lever, and from the machine came five strokes of a gong. The first Titan peered through the telescope and spoke again, a different syllable. The mechanism rang once.

Understanding flashed through Duane. The first Titan, evidently an astronomer, was studying a body in the skies and reading its position to his companion who registered the figure. The first word, then, meant "five," and the second word, "one." He jotted down the syllables as accurately as he remembered them.

The astronomer spoke again, the recorder pressed a lever, but no gong resounded. "Nothing, or zero," Duane wrote. The last number was "nine."

Silence descended, and now the intruder made out, upon a great mirror beside the recorder, a reflection of star fields, and guessed that the Titans were studying one among that horde. The astronomer called out, and the recorder raised his head. Duane wrote two words as the name of the recorder who played with intricate mechanisms.

Then the star fields began an apparent march, drawing ever nearer, until one bright sun or planet loomed largest in the mirror's center. The astronomer uttered a command, the reflection became motionless, and Duane wrote the phonetic transcription for "stop."

All this while his fear of discovery had been lessening since the attention of the giants was centered elsewhere, but his curiosity was mounting. Why were the great ones so interested in this star or planet? Who were they and how did their apparatus function? He wished that he could understand every word they spoke; given time enough, he

would, for already he had a fair list of primary words: several mathematical numbers, the concept "zero," a few verbs, including "stop," "continue" or "go," and "to be," the names of three of the Titans, and several adjectives of whose meaning he was uncertain but had an approximate understanding.

The star cluster swam closer until only one body filled the mirror. The recorder played with dials and levers, and the one sphere, now discernible as a planet, and approaching rapidly, expanded beyond the reflector's sides.

The Titans gathered around the mirror. The surface of the satellite raced toward them. Continents became visible, outlined by seas. Dark masses of forests and mountain ranges contrasted with units that looked like villages or cities. Paths, trees, huts, and lakes were visible. At last the recorder adjusted whatever mechanism controlled this optical marvel, and the picture again became stationary.

There on the Gargantuan panel, a forest glade showed clearly to the last detail. Strange and exotic trees, not unlike those of Earth's carboniferous era, raised great conical leaves and flower buds and full blooms to the sky. The ground was riotous with ferns and glossy flowers, orchidaceous cups and blossoms of wallflower brown.

Dawn was breaking and blue-white light filtered through the vegetation. Shadows shortened. Moths fluttered, and birds of brilliant plumage soared up with lyrical morning songs. A creature similar to a deer crossed with a rabbit bounded away in search of breakfast. Another beast, resembling a huge squirrel, but with a glossy coat and the membranes of a bat, flitted to the edge of a pool and, after

drinking greedily, frolicked away through the forest.

A path led to the pool. While the Titans and Duane looked on, a girl danced into view.

Nothing that he had experienced in these hectic weeks affected Duane as profoundly as the sight of that girl. She differed from the women of Earth, and yet she possessed a similarity. He thought that she looked like Anne—or was his impression only a wish fulfillment? In the quiet of dawn, she danced along. She wore no garments. Her supple figure, tawny as ripe wheat, pirouetted around trees, and her light feet dipped across mosses. She had hair of emerald, that floated lightly around her, and liquid, beguiling eyes of amber. A glow the color of goldenrod pollen enriched her face. Her fingers seemed boneless, so tapering were they, and flexible as she cupped them and wove them in supplication to the dawn.

The scene held beauty of an exquisite kind, from the lush petals of flowers and mossy carpet to the exotic trees; from the young girl dancing in the glow of sunrise to the light that shimmered through branch and leaf and formed patterns of divided darkness upon the ground.

Then the girl flung her arms skyward and lifted her face to greet the sun. In the forest glade she seemed lovelier than a naiad out of legend. Her lips parted, and Duane could almost hear the rapturous song that she caroled. Then she danced again in carefree abandon, swirling toward the edge of the pool, and there she flung herself down and laughed at her own drowning image in the waters.

From the poetry and enchantment of the idyll, Duane's attention was gradually turned to a crescendo

whose volume reverberated through the air. The Titans were talking excitedly, one Titan apparently scoffing at the others who ringed him. Judging by his gestures, he was discounting the truth of the visualization which had occurred upon the mirror. He strode from the circle and in a few Gargantuan steps was beside the microscope to resume whatever investigation he had interrupted.

His peril engraved itself on Duane's mind in a second that saw him frantically spin the door to the *White Bird*. His action came too late. The door was only partly sealed when a vast cry issued from the throat of the giant. The others looked over and began approaching him. Two fingers the size of barrels appeared at the edges of the slide and lifted it in a wild swoop skyward!

VI.

THAT CURVING SWEEP, almost vertical, which carried him a mile upward in a mere second, was more sickening than a plunge, but Duane quaked at a simple but terrifying incident that followed. The Titan raised him to eye level and scrutinized him with cold appraisal. His eye, huge as a room, with fathomless depths of black in it and a piercing, hypnotic pupil, overwhelmed Duane with its conviction of dynastic power and its attitude of unhuman, solely scientific analysis. No worm in alcohol, no microbe under the lens, could have felt more lowly than he, under the glare of that tremendous orb.

Duane was trapped and he knew it. One squeeze of colossal fingers and he would be pulp in the flattened shards of his stratoplane. It might have been fear, it might have been courage, that prompted him.

He opened the *White Bird's* door and stepped out onto the slide.

The great eye widened and its black depths stirred. The four other Titans gathered around like shining angels of doom, their stern, conquerors' faces staring at him with more interest, but no more personal feeling than they would have studied a fly. They talked rapidly, the cruel lips forming thunder that deafened at this close range. Duane gesticulated, and they became silent, looking at him and at each other with questioning glances. Using all the power he could muster, he shouted out the microscopist's name.

The effect was electrical. The Titan almost dropped the slide. He broke into a flood of questions, but the Earth man shook his head and shouted the syllable for "nothing."

The Titan understood—Duane did not know the questions. Walking toward a mechanism of abstruse nature, the astronomer set his captive on a table and placed upon his head a cap of metal with a skein of fine wires terminating in what resembled a telephone switchboard beside a smooth panel. He placed a similar cap on the table and indicated that Duane touch it with his head. It looked like the crown of an observatory, this hemisphere of the gods. A tingling flux ebbed through his body upon contact.

In the mirror appeared an image of the astronomer with his name underneath. Duane comprehended. This miraculous apparatus transformed thought currents into pictures and made ideas visible. Duane thought of his portrait and his name. Promptly they flashed upon the panel. In this novel manner, with the start he already had in finding something of their speech and language, he had little difficulty in carrying on a silent conversation.

"Did you come from Valadom—the planet in the reflector? Are you one of the little creatures?"

"No."

The Earth man's reply obviously surprised them. The scientists conferred, as if deciding whether he was giving truthful answers.

"Whence came you?"

Duane hesitated. Would they believe him if he told the truth? Should he rescind his first answer and assert that he was one of the "little creatures"? These were giants of intellect as well as Titans of body. It would be wiser to answer truthfully even if they scoffed. "I came from an atom under your microscope," he answered.

His reply raised a tempest, but not the skepticism that he had expected. The astronomer talked with new animation as though he had found support for a theory, and the mind reflector became a crazed confusion of mathematical symbols, concepts involving energy and matter, and hypotheses of atoms.

Appearances indicated that he had once set forth a theory that each particle of matter was as complex as the universe, and that submicroscopic parts might be star fields as elaborate as those visible above, and with life on a proportionately most infinitesimal scale, a theory which his associates must have decided against. The very concept taxed Duane's faculties. His universe an atom forming this sphere; this globe a planet in the superuniverse; and what if that billion-bodied unit was, as Dowell had suggested, only the molecule of a cosmos still more far-flung, above and beyond and outside? Conversely, were there universes within the atoms of the Earth he had left? Where did the cycle begin or end?

His gangling figure, in which

tensionness fought his desire to relax, must have presented a study in contrasts. The cathedral-esque majesty of this one hall that formed an arena as large as the ground and the heavens and the horizons of Earth was in itself a thing of wonder, but the lordly dwellers added the emotional burdens of awe and fear and inferiority, so massive were their statures, so radiant, so stern, so implacable, and godlike. And to the weight of these visible things was piled on concepts to stagger the brain of genius, or the universal mind, if such existed, or the intra-universal intellect. Yet the general patterns of nature as he knew it seemed to recur here. Where lay the beginning and whither the end? To what purpose? He drifted back from mental fog to find the Titans questioning him anew.

"CAN YOU RETURN to your universe, your atom?"

"No," Duane replied.

"Why not?"

"I do not know where it is. I would not know how to find it. If I could find it, I would not be able to enter. Something happened, when I burst through. I am bigger than my whole universe was. I cannot shrink down. Besides, millions of years have passed back there since I departed. I do not even know whether Earth, my planet, still exists."

The sages nodded gravely, accepting his statement, and evidently understanding far better than he did what had happened.

"What is the principle of your tiny ship, little one?"

Duane bristled and his lank joints stiffened. The *White Bird* a "tiny ship"? He, Colossus, called a "little one"? He swore angrily, and a flock of "damns" appeared on the

mind reflector. The Titans stared without feeling at these strange words, asked him to elaborate. Swallowing his indignation, he tried to pictorialize the building of the *White Bird*, and how it harnessed universal radiations for its energy. The Titans watched, attentive and impassive as before. And yet Duane sensed an extraordinary interest in his ideas; and by careful observation came to the conclusion that they had only recently built this laboratory with a scientific knowledge far in advance of that of the human race.

They, too, had discovered how to tap perpetual power. Already exploration of the great spaces, the outer abysses, the chasms and voids and illimitable depths, was under way. They were plainly amazed that any creature as minute as he could have progressed so far; and still more eagerness accompanied their absorption in his story of the submicroscopic electrons which, to beings as small as he once had been, yet represented a mysterious, enormous, and complex universe of inconceivable magnitude.

Duane felt his prestige rising. He thought it his turn to watch mind pictures and obtain some understanding of his journey's end.

"Who are you? Where am I?" he began.

The astronomer reflected soberly, as though weighing whether this mite could possibly grasp the ideas that might be presented. Then, upon the panel, flowed a stream of images: Qthyalos, a giant world in its ripe maturity, inhabited by Titans of deific knowledge and power, whose intellects rivaled in proportion the girth of their bodies; mind supreme in supreme and vital matter whose life-span averaged thousands of years.

AST-5

Duane's eyes ached when he saw their cities, how Cyclopean they were, and their works, how passing strange, and their arts, how alien and bizarre. Their structures baffled him with their apparent fluxes and processional changes, their tenuous and unreal unstability, combining with solid attributes. Had they a four-dimensional basis that warped straight lines into arcs, and spheres into helical spirals, and cubes into weirdly shimmering pyramids?

What was the gleaming stuff that composed these megalithic metropolises which shone with blinding color and yet whose incandescence was underlain with the shadow and ambiguity and shifting forms of a geometry that eluded him? Whether he understood or not, the résumé flowed on, and now he found why they were examining Valadom with such interest when he came. He translated the series of images into words.

"One of our exploring flyers reported that he thought he saw signs of life on a small planet of our system." Here the consecutive pictures broke, and a sight of the giant globe Qthyalos flashed forth alone, then the image of its sun and hundreds of large and small planets that made a solar system upon a huge scale; then the great sweep of a galaxy, and beyond this island universe—nebula after nebula, star-field on star-field, flaming gas and black voids, soaring outward and deepening afar toward infinity, the eternal abyss.

Duane, humble in the presence of this immensity so like his own universe but of so immeasurably a more stupendous range, watched with almost glazed eyes the resumption of the story.

"Only recently have we controlled

optical and intra-spatial laws to such a degree that we could bring any planet of our system into as close focus as we wished. We have been studying one planet or more nightly for the past year, but discovered no signs of life until the explorer reported to-day on Valadom, which we studied through a telescope a while ago.

"We had intended to send scientists there to obtain specimens of these curious little creatures, who seem to be much like us, for laboratory study and analysis. There are several difficulties in the way. One is their tiny size. Judging by the one we saw, they can be no larger than you. Consequently, if we landed, they would probably be so paralyzed by fright that they would all run away and hide. We might step on thousands of them without ever realizing it. Great pains would be needed to capture even one, and he would be likely to be badly damaged or fear-filled so as to be useless to us.

"We could not camp there. It is doubtful if we could live on that small asteroid. The air blanket would extend, perhaps, no higher than our heads. Even if we took advantage of all our wisdom, conditions would be most unfavorable for observation. Our purpose would not be wholly answered by observation from here. We can watch actions, but we cannot discover their past, interpret their thoughts, examine their true nature, or obtain more than a general idea of their life."

This long sequence, much of it obscure and only guessed at by Duane because of the abstract quality of the pictures which resulted from the Titan's attempt to visualize concepts, seemed to be leading up to a definite end.

THE FIVE CONFERRED among themselves, their miens dignified and stately with an austerity that ascetics would have envied. Like sculpture of gods, like the chiseled, enigmatic heads of Easter Island, like uncrowned rulers debating the fate of empires, and with expressions immobile to a degree that seemed stony, the Cyclopean beings conversed in voices that quaked like thunder, roaring in Duane's ears, cataclysmic volumes of resonance. From this table top, now that the shining giants stood erect, they looked like figures of hewn marble slashed from mountains.

Fleeting, he thought of plunging into the *White Bird* and rocketing off, but he knew the gamble would not win. The heads in conclave miles above, the horizon-reaching sweep of floor and apparatus and devices, the seemingly boundless space overhead, offered no hope of escape. Then the stone-hard, mercury-glistening head of the astronomer bent toward him in a rush that sent violent currents of air whirling across the table, and the lordly entity spoke words that he could not understand, but whose import was translated by the mind panel.

"Since it is unwise to explore Valadom, and difficult to obtain a little creature, we have decided to dissect you, instead, and discover how you work, what you are made of, and how you react."

The Titan enunciated doom as if he conferred an honor. His expression was imperturbable. Why he should have announced to the victim his purpose remained a riddle, unless he had access to power beyond Duane's knowledge, or unless the fervor of scientific inquiry obsessed him, and he saw goals but forgot intermediaries.

Whatever the reason, it mattered little to Duane. His life hung at stake. He was no more than a germ, an insect, a minute creature, a worm, to these Titans. There was neither cruelty, enmity, nor any other emotion in the statement. To them, it was a simple fact. Here stood a little creature who stimulated their curiosity. He would make a splendid laboratory specimen. They did not like him or resent him. They had no feeling about him. The cause of knowledge would be far advanced by the dissection and analysis of this specimen of a new species.

The Earth exile, the chill of horror overcoming him at his prospective fate, strove to think. Was this to be the reward of his stellar Odyssey? This bitter death in foreign places to be the last goal? This going out, not in glory, but ignominiously, with not so much quickness and almost as little distinction as the lowliest insect?

He would make a run for it at the end, a dash that at least would win him fast oblivion in a snap of those monstrous fingers. Better to be slapped into pulp than to linger under the knife. But these were Titans dominated wholly by mind and its pursuits. If he could only appeal to their rational nature!

Upon the reflector appeared the ideas set up by his chain of thought, the appeal and defense that he mentally projected:

"Titans! I am not one of the little creatures of Valadom! You may put me under the microscope and the knife, but you will still know nothing of how the little creatures work!"

The master of the microscope lowered the mammoth and marmoreal sculpture of his flat-backed head, donned a metal cap, and with brood-

ing visage replied through thought-presentation: "It does not matter. We find out how you work, and later how the little creatures work, as well."

Disheartened, Duane tried again. "My death will not serve you, Titans! You will discover what I am made of, but only that, and you will know little of my life!"

He had made a bad mistake, a tactical blunder, and he realized it the instant he spoke. Sweat oozed out on his forehead. The biologist-Titan destroyed his plea with: "We do not plan to end you for some time. We will keep you under observation for experiments in the laboratory for as long as may be necessary until we have exhausted your animate being. Then we will take you apart."

Only the aims of high endeavor lightened the black, enormous eyes. No feeling marred their serenity and repose as the sentence of death remained.

Discouraged, but with will indomitable while life lasted, and with wits sharpened by this intellectual battle for preservation, Duane made a new shift in the game. "Titans! I am like you. I think, I feel, I am as you are! Why then dissect me? I differ principally in size from you! Would you dismember one of your own race?"

"We have taken apart enough beings among ourselves to find out what causes us to be what we are," came the unexpected and disillusioning response. "You resemble us, but exact study of everything in you will be necessary to prove the similarities and differences between us. Your head has a strange shape. Thus your brain cannot function quite like ours."

The web tightened. They closed each argument as quickly as he ad-

vanced it. His sole comfort was their consent to listen, dispassionately, detached, impersonal, weighing his reasons for their intrinsic validity. He had one chance left, short of a fatal dash, and he put all his persuasive mental resources into the gamble.

"Titans! I will make a bargain with you! Let me enter my cosmocraft and depart. I will go to Valadom! I will live among the little people. I will stay there for a year. I will learn their language, study their customs and history, interpret their life. At the end of a year, I will return and give you all the knowledge I have obtained. Furthermore, I will bring back at least one dead specimen of the little people for you to examine. All this I promise, Titans, in return for two conditions—you will agree not to harm me when I return, and you will agree not to harm the little people of Valadom."

THE FIVE GRAVE giants, like judges studying evidence, considered his proposal. He sensed the biologist arguing against him, and in favor of immediate experimentation, since specimens of the little creatures might be obtained later. The astronomer favored his case, for he would enable them without trouble to obtain a complete record of Valadom, and in the year intervening they could pursue researches into other parts of the universe. The three remaining giants appeared to show little preference which way the discussion ended.

Duane, tense and drawn, waited for their decision. There was a grotesque quality to this situation, something both superhuman and supernormal, something both familiar and foreign, something gigantically dissimilar between these Cyclopean

conquerors with their minds that thirsted for knowledge alone, and he himself, a mite to them, but pleading for his existence—he, who in his own search for the answer to the mystery of things had performed the feat of bursting through a universe and leaving it but an atom behind. Colossus though he had become, he was only an insect to them! Titanic though they seemed, were they only submicroscopic, submeasurable motes in the fathomless molecule beyond?

The astronomer prepared to reply, and Duane's eyes hovered on the reflector; a lone, small figure against fate and the gods, he watched judgment.

"Little creature, we have decided that the cause of knowledge will be furthered better and quicker by your going to Valadom and returning here, than by our analyzing you now. We will allow you to proceed on your way, but you must return according to your agreement in a year. Go!"

Shaking in the nervous let-down that followed reprieve, he said: "I thank you, Titans. What pledge will you have?"

"Pledge? Truth showed in your thoughts. If it had not, we would not let you depart. Do you know the way to Valadom?"

"No."

The astronomer flashed upon the screen picture after picture of the skies, the principal stars, Valadom and Qthalos and their system, until Duane had the necessary directions. Then he bowed to those great beings, who, incalculable, thinking thoughts beyond his grasp, and preserving a silence more stately than the repose of a deserted cathedral, watched him depart.

Neither well-wishing nor friendly farewell attended his going. The flat-backed heads of sloping brow,

the stern lips, the chins and noses of deific disdain, the cheek bones of godlike pride, the faces of sexless radiance, the black, tremendous eyes from whose wells shone the vision of destroying angels, these betrayed unhuman, abstract interest, and nothing more.

The *White Bird* soared skyward in a beautiful arc. The heads of the Titans dropped away. The horizon-sweeping immensity of the observatory fell behind, and became like an ordinary room, with beings of generally anthropomorphic nature standing amid devices and structures of puzzling design. The austere faces of the giants blurred to points as the wanderer of infinity rocketed outward through the open roof in a trajectory that followed the league-long telescope.

It gave him a queazy sensation to realize that he himself, could he see himself with the eyes of man, must be Colossus multi-magnified as a result of the transmutation that had occurred when he annihilated space and sundered his universe, yet only a thumbnail pygmy to them, who were nothing compared with the molecule beyond!

His last impression of the lordly dwellers on Qthyalos was one of profound reverence mingled with fruitless speculation. Who they were and what their nature remained almost as insoluble conjectures as when he first saw them. Then darkness enfolded him and he burst through the dome where it lay open for the telescope.

VII.

NOW THERE WERE star-fields again, and the ceaseless throngs shone above, and the skies hung strange and alien, ablaze with infinite brilliant jewels. On the rim

of the northern horizon sank a pale-gray moon, and on the edge of a southern sea sank a moon of orange.

As the *White Bird* soared, Duane looked back. The surface of Qthyalos, in the shadow of night and under the canopy of stars, stretched vast, dim, and mysterious. There were mountain ranges striking stark and bold five thousand miles and more into the citadels of space, peaks of terrific bleakness until their ice-crowns of naked and blue-white grandeur blocked the skies beyond them.

The observatory itself stood on a precipice whose sides were chasms plunging sheer through sooty gulfs. There were cities on the plains and in the valleys, monstrous metropolises, dark towers out of fable, erections on titanic scale that tortured vision with illusions of a new geometry, dream cities as unreal as the domes of Xanadu, and assaulting the skies themselves with their topmost and almost topless towers.

There were lakes as large as seas, and seas that curved like the arc of heaven. There were islands the size of continents, and continents of unguessable extent.

Colossal lords of a colossal planet! Qthyalos, a single planet huger than the universe, faded, with all its mysteries and all its visionary wonder, farther and ever farther behind. Its mass became a dark puzzle, but its rim brightened sharply and the edge of a dazzling sun crept out.

The *White Bird* sped on, and the central sun emerged into the radiant glory, a white-hot orb that compared with Qthyalos as a balloon to a ball-bearing. There were great planets and multiple moons and a host of asteroids behind, on the opposite side of this system; and ahead shone other planets and moons against the tapestry of space; and among them

glimmered Valadom, a mere asteroid to Titan, a sphere as big as Earth to Duane's sense of values.

The *White Bird* winged onward in accelerating tempo that shot her toward her goal. Scarcely an hour could have lapsed as his senses recorded time before Valadom became discernible as a tiny globe. Beyond it, the enormous sweep of constellations sprinkled infinity; and beyond the riotous blaze glowed the haze of nebulae where the celestial parade began of outward-flung galaxies in the remote depths and recesses of this cosmos. Twin stars and suns of purple and white and gold, myriad moons and planets of silvery splendor, space and night held unrivaled beauty, majesty, and glory, a spectacular display that challenged the scope of imagination, and the *White Bird* only a streaming blur amid the immensities and infinitudes.

He felt tempted to trick the Titans; to blast his way outward and discover the final organism or farthest megacosmos, to test Dowell's theory in its ultimate scope. His pledge to the Titans prevailed.

Yet it was with a sense of cosmic weariness that Duane approached Valadom. The everlasting procession of stars and galactic universes began to pall. Who could say what lay beyond the utmost outpost? Beyond this cosmos—another atom on a larger scale? A cell or molecule? Or night eternal? Or mysterious limitations where space finally ceased? His mind withdrew from visions too vast, speculations where madness lay.

Oddly, he felt a gladness as Valadom loomed large, the gladness of the wanderer homeward bound from voyages afar. The blinding sun shone remotely behind, yet still far larger than the Sun of Earth; and

to one side hung Qthyalos, abode of Titans; and, in relation to them, Valadom seemed hardly so much as a pin point, but it loomed fully the size of Earth.

Duane's thoughts recurred to Anne with a kind of sad longing for her companionship. So well she would have changed the loneliness of his travels! So sweet a comfort she would have been! But irrecoverable years in a universe more distant than Carcosa and Hali divided him from the dead dream of love.

Valadom swept close. Moody, the expression of an old man in his youthful eyes, Duane watched the harbor draw nigh. He could not rid himself of the feeling that the Titans watched his progress through their telescopic and ultra-optical equipment; and the sense of their invisible presence billions of miles behind was a depressant only partly relieved by his impression of another presence, ghostly, intangible, elusive.

But over Valadom lay quiet; the quiet of dawn above the seas and continents toward which he dropped; and peace became part of his mood. His thoughts drifted to the lovely and forlorn creature he had watched make her obeisance to the morning. Did she still recline beside the pool? Or had she danced her way back to lover or family or mate? Duane was startled by his interest and resentment. Preposterous! He did not even know the nature of this child of Valadom, and he might never find her, yet he dreamed while the planet rushed near.

Seas outlined themselves against land masses. He recognized the topography as he recalled it in the Titans' reflector. Swiftly the *White Bird* settled, too swiftly. He unloosed the triple fore projectors to break his fall. The *White Bird*

leveled away high over a tossing sea, and headed westward until the coasts of a continent swam out of azure mist.

There were dots on the ocean below—atolls or flotsam or small craft? He could not tell and did not pause. The ramparts of a village or city rose on a bay. Civilization? Or savagery? Did it indicate rising culture and progress, or decline from a peak surpassed? Time might answer; now, he had only a desire, curiously compelling, to reach the glade he had seen. The village flowed underneath, its architecture analogous to that of the Greeks—temple and dwelling, shrine and inn, lying white and pagan in the dawn.

The *White Bird* dipped toward the surrounding forest, for here should lie the haven he sought. The dark thread of a river wound its way seaward in the distance. The forest rushed up. The *White Bird* settled toward a greensward between two ridges, which he recognized immediately as the vista he had scrutinized from Qthyalos. Here lay the pool, a disk of emerald.

The *White Bird* came to rest upon grasses and lush flowers amid trees of fantastic shape. The loose-jointed figure of the Earth man slouched out.

MORNING HAD BROKEN. The sun stood high, Qthyalos a sphere of misty beauty beside it. A soft wind blew, and he breathed deeply of that fresh, fragrant elixir. Sounds came from the forest, strange songs of unknown birds and cries of hidden beasts. Moths of brilliant coloring made splashes of cerise and green-gold, lemon and indigo and ebony; one long-beaked bird, imperial purple with markings of pomegranate red, flew past, a lovely thing until it croaked harshly.

Everywhere rose curious vegetation; flower-capped stalks; ferns of feathery grace; lichens and great single leaves; coniferous trees; weird trunks and stems from which clusters of berries, fruit, nuts, and blossoms hung; buds like bursting seed pods; thick moss. The ground was a carpet where green grew the grasses, and over them wealth of blooms; orchids that lifted hot faces to the sun; petals of silver freaked with black, and of turquoise, of cinnamon, of pistachio, and blood; a hectic riot wherein colors of fever and tones of coolness splashed the landscape.

The wanderer, amid this drowsy paradise, where dreams faded and aspirations vanished in the presence of nature's extravagance, trod his way toward the pool. Through foliage and frondage and leafy patch, with sunlight fretting arabesques of light and shadow athwart his path, he sauntered on, wearily, hesitantly, but with active curiosity.

There was never so exquisite a peace as this, so ineffable a haven, and the rising music of birds became a choir that only deepened the repose. Then a voice caroled, a rich, glad hymn to the sun, soaring and falling, deepening with ecstasy and dreamful of rapture. His mood responded to the song and the invisible singer. As he wove his way through the forest, the recollection of Anne rose like a specter hovering behind the lyrical and golden-throated phrases.

Then he came to the edge of the glade and saw the girl. She stood beside the pool. She laughed at the sky and the sun, the land and the waters. Her young face flushed in the bloom of youth. Her emerald hair hung silken around her throat and shoulders. She sang for the glory of living, the breathless adora-

tion of being, and her voice warbled gladness. She whirled in light abandon, and the hair rippled across her back and shimmered against the glow of her skin.

For a long minute, Duane dwelt on the beauty of her figure and her dance, the grace of her rhythm, before he stepped out.

Exile from Earth and child of Valadom, they faced each other. The dance came to an abrupt end.

Her amber eyes grew wide and startled, questioning the intruder. Hesitantly, he stepped a pace forward and greeted the girl with hands spread in token of peace.

Her lips parted and her eyes, showing neither the fear nor the mistrust that he might have expected, shone of something secret, as if to greet some dimly remembered and half-forgotten friend of long ago.

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He poured bullet after bullet into that horrible body.

WORLD FLIGHT

by S. Gordon Gurwit

DARJEELING, INDIA. Sept. 12. (Special.) A mysterious white man, babbling incoherently, was found yesterday wandering along a mountain pass by some Nepalese and Lepchas women porters. Brought to Darjeeling, he was later sent to the hospital at Siliguri, where his case was diagnosed as shock from exposure and starvation. One of his feet was

badly frozen. He had no identification on his person, and an attempt is being made to locate his relatives or friends.

The above clipping is from a Darjeeling newspaper. There is another clipping which followed on September 18th, but more of that later on.

During the false dawn, ghostly

figures could be seen on the beach. And as the sun touched the horizon, an opalescent haze drifted in from the Atlantic. Four thirty-eight a. m.! Sunrise. The beach suddenly teemed with a surprising activity.

Around a huge, shrouded shape, men were collecting; men with cameras, men with tools. As the sun dissipated the pea-soup fog, the activities grew fevered.

In one of the beach shacks, two young men, in aviators' costumes, were listening to the government weather reports from Montreal. "The flying forecast is clear, with an unlimited ceiling," said the voice, and droned on to give details.

Jim Goodwin turned to the other helmeted figure and grinned. "Well?" he asked. "What do you say, navigator?"

"We hop off!" said Philip Brownell, and turned to the reporters: "Now, be good fellows and don't hinder, will you?"

"But, Mr. Brownell—" It was one of the reporters. "Can't you give us some dope? This new plane of yours—"

"Goodwin will talk to you," answered Brownell and walked out.

Goodwin turned and smiled. "There's nothing new to say—it's a steam plane. We carry enough fuel to take us to Asia. We condense our steam and use it all over again as water—"

"It's your own invention?"

"Yes; Mr. Brownell's and mine."

"Well, give us some dope on it, will you? It's the first of its kind, isn't it?"

"Hardly! Henri Giffard, in 1852, made the first one. Sir Hiram Maxim, in 1894, built a huge, steam-powered plane. There have been others. Ours is the first practical steam-power plant, we believe."

"Can you give us some dope on the motor?"

"Yes. We use a compound, double-acting, V-type power plant—two-cylinder. At 800 degrees, the steam pressure is up to 1,600 pounds and gives us 1,700 r. p. m. Our power plant weighs 200 pounds and delivers 200 horse power. Ten gallons of water will carry us a thousand miles; and we hope, ultimately, to make the water last indefinitely, by recondensation."

"How do you generate steam?"

"With a cheap, vaporized fuel oil, obtainable anywhere as easily as the water we use. There is no danger of fire. A blow torch on our fuel only makes it smolder."

"Any other advantage as against the gasoline engine?"

"Gas engines in planes lose their power the higher they go—steam becomes more efficient. In an air-tight cabin, we can travel in the stratosphere, above storms, immune to any weather conditions. Steam is noiseless. It makes an ideal military plane."

"What's the object of this world flight?"

"If we succeed in our round-the-world demonstration flight, we have the opportunity of selling the patents to our government."

Silently, the group of men stood while the plane was made ready. Steam was up in the boiler. As the disk of the sun came full above the horizon, Goodwin and Brownell turned to one another and shook hands. There were many years of friendship behind that handclasp—the friendship of old Judea—of David for Jonathan; a friendship closer than that of brothers.

"Hold that!" cried one of the newspapermen. "We want a pic of that!"

Ten minutes later, the plane took

off with a mysterious silence—a soft hiss of steam—and the two adventurers were irrevocably committed to their great adventure.

The plane circled the beach once and headed off into the misty reaches of the Atlantic. Shortly afterward, it was sighted over Fog Island, and a little later over Musgrave harbor, the farthest easterly point off the mainland. Moscow was the first scheduled stop, though the flyers maintained that they could make Omsk at the first jump. If they could maintain their boasted speed of over two hundred miles an hour, they would, with no mishaps, lower the existing world record.

In the meanwhile, the plane disappeared into the mysterious reaches of the sky, and a whole world waited at the radio for news.

AS THE LAST LAND disappeared, Goodwin turned toward Brownell and grinned.

"Well, skipper?" he asked. He was at the controls.

There was silence in the little cabin, in direct contrast to gas-engine propelled planes. The soft hiss of steam was soothing; below, the north Atlantic tossed in a spanking breeze that was fast chasing the fog; above, the cloudless May sky loomed vast, empty.

"Keep her at five thousand," answered Brownell. "Looks like we'll have good weather, Jim. Stay above that mist and take advantage of that tail wind."

"Right!" said Goodwin. He faced forward and pulled up the stick. "Here we go, Phil!"

Forty hours later, the city of Omsk was startled by the appearance of a huge, silent plane that dropped from the sky with no more effort than a bird. The news was flashed to a waiting world. Goodwin and

Brownell had flown from Harbor Grace to Omsk in forty hours in a steam-powered plane. It was a new, impressive record.

They took off again after a short rest and headed south, into China. Their plan was to cut through to Calcutta, and they wanted to make an altitude record over the Himalaya Mountains. If they could bring back pictures of the highest ranges, there would be no question of the plane's ability.

They radioed a message on Friday evening, which was consumed by a thrill-hungry public:

Everything all right. Heading over the Himalayas for photographs of Mount Everest, if weather permits. *Goodwin and Brownell.*

And that was the last message that the world had from the two adventurers. They simply vanished into thin air. Searching parties went out, sent by various governments; and every reader of these lines will recall the strenuous efforts that were made to find them; but it was useless.

"If they fell into some uninhabited portion of the Nan Shan, the Kuenlun, or the Himalaya range," said one newspaper, "it is possible that they will never be found."

The search went on, however, and reports filtered into civilization occasionally; but finally they were forgotten and took their place with those other intrepid souls who had fared forth into the skies and disappeared, leaving no trace.

THE PLANE BEGAN to act strangely an hour after they passed the towering Dhawalagiri Peak. Ahead loomed the sky-piercing peaks of the Himalayas, crowned by one vast, snow-capped tooth, which they logged as Everest.

"Kick her up, Jim!" said Brownell. "Here's where we make some readings on our sealed altimeter! And maybe we can get some pictures."

"Up she goes, Phil! Look at the glass! Weather ahead!"

Over the vast range to the south a strange dusk was falling. Below them appeared an enormous table-land—a plateau—seemingly like a natural park; to the west loomed another gigantic mountain. Not a sign of human habitation met the eye.

Goodwin swore suddenly. "This damn thing doesn't answer!" he complained. "Is anything wrong back there?"

Brownell glanced to the back of the plane and shook his head. "Nothing visible, Jim—hey—throw her up!"

"Can't!" snapped Goodwin, struggling with the controls.

"Well, head out toward civilization—we can't make a forced landing here. That plateau down there is uninhabited—"

"Can't keep her up!" gasped Goodwin. "Something's pulling the damn thing down! Look here—I'm pulling hard on the stick and she's pancaking down! Hold everything, Phil! Something's wrong. We'll have to make a landing and investigate!"

Because he was an excellent pilot, Goodwin was able to bring the ship down in a bumpy, three-point landing. Both men climbed out to investigate. They could discover nothing out of the way.

It was Goodwin who made the startling discovery. His eyes wide, he pointed to a thin tracery visible over a group of trees.

"Look there," he said, low. "Am I cockeyed, or is that the antenna of a broadcasting station? By God, it is an antenna!"

"Certainly looks like one, but how

would one get out here—in the wilderness of the Himalayas?"

They had landed in a large, open space; it was hard, flinty ground, with hardy-looking shrub covering the surface here and there. Stunted conifers, aspen, and spruce, of a queer variety, stood in scattered groups.

"Where are we?" queried Jim. "Let's take a look!"

Brownell climbed back into the plane and looked at his charts, Goodwin following.

"Near as I can make out, we should be somewhere near Khammandu and Lhassa. Look here—the altimeter reads 9,500 feet. No wonder it's so cold! Well, let's see if she'll take off now—"

"You're not going to leave before we find out what sort of station that is over there, are you?"

"To hell with it!" snapped Brownell. "Somehow, that thing—this place—gives me the creeps!"

"But, Phil—"

"I mean it! Let's go, Jim. Tramp on the gun!"

But the plane wouldn't move. No amount of coaxing would budge it from the spot.

"Something's all wrong!" Goodwin swore. "This is uncanny. Acts like she's nailed down! Let's get out and look again."

ONCE MORE ON the ground, they went over the ship in growing concern, but found nothing amiss. Jim shrugged, and Phil scratched his head in puzzlement, his eyes straying to the strange-looking antenna, spidery, startling in this wilderness.

"We'll have to get some help, I guess," he conceded. "There must be some people in that place, and it looks only a mile or so—"

"Look!" gasped Jim, pointing. "Either I'm crazy, or—"

Phil Brownell swung around, and his eyes popped open.

"Good God, it's real!" whispered Jim.

His hair rose with a prickling sensation. He hardly credited his eyes. Something—he hardly dared name it—stood and looked at them. It was an insect—a bug—undoubtedly, but it was as big as a horse. And it seemingly had a face, something so monstrously hideous, something so like the fantastic creature of a nightmare, that his senses refused to credit its existence.

Six great, black, spiderlike feet, with spikelike hair, supported the body, which seemed to be divided into three sacks; an insane fierceness, a blood lust insatiable, glowed in the faceted eyes; and a smaller creature, under its powerful legs, struggled desperately to escape.

A scream struggled to Brownell's throat and died there; Goodwin swore softly.

The slavering mouth of the huge Thing, armed with terrifying pinchers, exuded a greenish slime as it tore at the smaller creature, which it was killing with an insane lust. Finally, it stopped its struggles, and the huge, spiderlike Thing tore at its prey with a drooling gusto, uttering a thin, high whine as it feasted in primordial savagery.

Brownell suddenly cried out and ran for the plane. The Thing looked up at him with a venomous malevolence, but there was no reason in the globular eyes; it feasted on, tearing its victim apart with its armorlike pinchers.

The sheer paralysis of fear that held Goodwin prisoner snapped. He ran toward the plane and tried to enter just as Brownell came out, an automatic in his hand.

"Don't, for God's sake!" cried Goodwin. "That thing can't be

killed with pistol bullets, Phil! It's too big. You'll only succeed in making it angry and it'll attack us—"

But Brownell was beyond reason. He stood, feet apart, firing bullet after bullet into the sacklike bodies of the unbelievable monster. And the Thing turned in bewilderment, ceasing its horrible feast. Great blobs of greenish matter oozed from the wounds, and the Thing wobbled, and finally sank to the ground. The heavy forty-five caliber bullets had wounded it severely.

The colossal, faceted eyes were blinking, a membranous film passing with lightninglike rapidity across them. It sank down upon the half-consumed body of the lesser animal, mucus poured from its filthy, sucker-like mouth, and the terrifying pinchers clamped together sharply in the spasmodic throes of death.

Sheer paralysis had held both men motionless as they watched the grotesque Thing, and they gave little heed to the sharp pistol shots; but they turned to encounter the eyes of a dozen peculiarly-garbed, high-cheek-boned Mongols—and were struck dumb by the size of the men. Every one was well over seven feet in height, and each man carried a rifle and a large automatic pistol in his belt.

Instinctively, Brownell swung his pistol in line and snapped the trigger, but it clicked on an empty barrel. The huge men ranged themselves silently between them and the plane, and one, a veritable giant of a man, motioned toward the towers of the broadcasting station, uttering a guttural phrase. They both understood it to mean that they were to follow him.

Goodwin suddenly shrugged and smiled. Brownell stood and stared with unbelieving eyes.

"They want us to go with them," said Goodwin. "Let's go. There's no choice, and these guys are too big to argue with. Look at those pistols! I wonder if we killed their pet what-is-it? Are you sure we're on earth? Sure we didn't land on Jupiter or Mars? That Thing over there and these giants make me think I'm seeing things!"

Following the strange-looking giants, they traversed a mile or more of stunted forests and came upon a scene that wrung a startled cry from Goodwin's lips: Against the sheer mountainside was a vast cluster of fantastic buildings, low, red-roofed, white-walled, gold-embellished; and there were several, huge, central buildings towering aloft. A tremendous crag hid it from sight from the air in the direction from which they had come.

"Ju Kong," said the tremendous leader of the men, who was guiding them. His long hair was coiled about his head like a black snake. They found out later that he was a "Nuckhwa"—a sorcerer.

"He means, I guess," interpreted Goodwin, "that we are to go to that big house."

Brownell nodded, his eyes busy with the startling activities of the scene about him. Vast lines of monklike figures walked in monastic processions on the streets, from one building to another. Tibetan belles, with their hair hung in one hundred and eight braids, typifying the one hundred and eight books of the Tibetan Bible, stared at them curiously. Mostly, the people were of ordinary size, but here and there were groups of the huge people of the same species or tribe as those who accompanied them.

"Nga Shinn!" said the big fellow again, motioning to Brownell's pistol and extending his hand. The

meaning was clear. The weapon was to be surrendered. Brownell handed it over.

SEVERAL MINUTES LATER they stood in front of a huge building some six or seven stories in height. They were ushered into a tremendous, pillared hall, with a huge, dimly discerned idol at the far, gloomy end. They learned later that the hall was capable of housing five thousand chanting lamas at one time—and here a whispered conference took place between the leader of the group, who had guided them, and another seven-foot savage, and they were gently pushed through a door.

To their astonishment, they found themselves in a large room, elegantly furnished in the oriental manner. There were exquisite rugs, divans, antique tapestries, and embroideries; wall scrolls from the hands of masters who had turned to dust before Christ was born at Bethlehem; delicate jades and lacquered stands, with pearl marquetry, supporting hideous, pot-bellied gods; "Tung-hahs"—or sacred paintings on cloth. There were fresh flowers of a dozen varieties and a subtle incense of lotus. Wood fires burned in fireplaces, for it is cold at this altitude.

Then their attention was chained to an incredibly tall figure, draped in flowing yellow, that advanced to meet them; an old man, apparently, well over the seven-foot mark, even though he was bent with extreme age. And about the room stood the huge Mongol savages, all over seven feet in height, all armed with pistols.

The eyes of both Americans were riveted to the old man's incredible face, withered and seamed and wrinkled with age. The livid, glittering eyes, sunk deeply in their sockets, darted here and there, like

the swift lunges of an angry serpent. The head was hairless, topped by a black skullcap, with a button on top formed by a glowing ruby.

There was something fantastically repulsive about the age-withered, wrinkled hands, tipped by finger nails of extreme length. Both recoiled instinctively before the demoniacal eyes. To add to their astonishment, the aged yellow man said, in perfect English:

"How do you do? I believe I have the honor of addressing Mr. Goodwin and Mr. Brownell?" The voice was stilted, hissing.

"Why—ah—yes!" said Goodwin. "How could you know—"

"You see—I did know!" answered the old man, and a chuckle rumbled deeply in his cavernous chest. "You see—I brought you here!"

"You brought us here?" repeated Brownell. "What do you mean?"

"I am Doctor Fang," he answered indirectly, "the living Buddha. We have much to talk about. Will you sit, gentlemen?"

He led the way to a window, where several divans stood, and politely indicated them to seats, his bodyguard following silently; then he seated himself opposite them and regarded them both.

"You"—he spoke to Goodwin—"must be Goodwin? So I thought! A very clever pilot and a good brain. And you"—he turned to Brownell—"are the mechanical genius, Brownell. I have use for you both. Now—"

"What did you mean—you brought us here?" asked Brownell.

The aged Mongol's awesome eyes flashed. A thin smile curved the withered lips.

"Your plane refused to go farther, did it not? It came to earth despite your efforts to keep it aloft—and refuses to move? Let that be suf-

ficient! I need that plane! It runs silently, cannot be heard at night, and will be the instrument of rescuing a downtrodden people from a savage oppressor!"

"I still don't understand—"

"Then I shall make myself clear. You are in the sacred lamasery of Lhadrang Gomba, unknown to the world. I am Doctor Fang, the living Buddha, and this is my Ju Kong, the private chapel. As you may have guessed, I am Chinese; but I have ruled Tibet for a long time! You have seen some of my men of the wild Ngolok tribe? Big men and good soldiers. I made them. There are many of them."

Both Americans sat silent. What did he mean—he made them? He went on:

"Here are five hundred thousand miles of the earth's surface, peopled by tribes of which the world knows nothing, ruled by religion alone through a Lamaistic system which completely dominates the people. It is an empire with no political government, but with every man a soldier. I have been building this empire for many years—so many, that to tell you would make you doubt me; but now I am ready." The fierce eyes glittered insanely.

"We are not unversed in the mechanical marvels and skill of the western world," he went on. "Through the radio we know of many things. I knew of your revolutionary plane. When you came within the influence of my towers, I pulled you to earth—"

"You what?" shouted Brownell suddenly, coming to his feet.

"Sit down!" There was thunderous command in the voice; a vast authority. The huge guards eyed Brownell and fingered their pistols. Brownell sat down. Doctor Fang chuckled. He went on:

"We of the oriental world know many things unknown to you of the occidental world, though we acknowledge the superiority of your mechanical genius. This plane is a case in point. I knew that you would come over the highlands, and I needed that plane. By the way, it is not damaged?"

"No," answered Brownell, sullenly, while Goodwin silently watched the aged Chinaman, letting Brownell do the talking.

He found an overpowering fascination in the wrinkled old man, and the bizarre thought struck him that the man looked hundreds of years old. It was silly, of course, but the man looked it.

"That is fine!" said Doctor Fang. "We will build many of them here, bringing our supplies from Lanchow. It will take time, but I will insure you both against age and disease; and, in the meanwhile, we will gradually depopulate the islands of the dwarfs who harass and worry at the throat of China——"

"What?" snapped Brownell. "You mean years? Do you think we'll stay here? Do you think we'll——"

"And how will you help it?" There was satirical amusement in the aged eyes, and a sudden, venomous hostility.

"Why——"

"Precisely! A ready answer is lacking. I would advise that you both accept the dictates of fate and allow me to be your friend. It will be best. If you work with me there is a great future for you; if you refuse, there is nothing before you but death. Let me make that plain."

"Just what do you want?" Goodwin spoke for the first time.

DOCTOR FANG TURNED to him, and the beady, sulphurous eyes seemed to stab through him. He

felt their weird power in the very depths of his brain.

"You are sensible," approved the aged Fang. "That is good. For many years I have built my empire here——"

"How many, doctor?" asked Goodwin, with a curious smile.

Doctor Fang eyed him intently. "For over three hundred—as you count time!"

"You mean to say—you are over three hundred years old?"

"Is that so very much? You evidently do not know anything of pathology and physiology, or even of the radical biological improvement of the human race which is now known in your own country. Three hundred years is not very long. I expect to live many times that! Here, in the solitude, we have found a way to safeguard against all the ordinary emotional and physical shocks of living."

"But, how, doctor?"

"By the inoculation, into the muscles or veins, of a protein compound, derived from ox blood. It not only cures disease, but, as a hemo-protein, builds the body and nerve tissues up to a point where they are not damaged so much by shocks or strains or wounds. You see my Ngolok natives?"

"Yes—big men——"

"They were your size—once!" He chuckled gruesomely. "So was I. I built them up to over seven feet in height—gave them tremendous bulk and power; and they will live twice the ordinary life span! They are superhuman!"

Goodwin only stared. Brownell wet his lips, his eyes popping. The old man went on:

"That is one of our oriental secrets, though some of your men of science are stumbling upon the basic facts, I note. You saw the ex-

periment—the insect my men tell me you killed?"

"That horrible nightmare where we landed? An insect as large—"

"Precisely! It took years to build them up. You happened to land in my private preserve—where I keep such experiments safely fenced in. Think what would happen if several thousand of them were turned loose in Japan, trained to kill—"

He paused and chuckled ghoulishly. "One of the forces I shall employ to drive the dwarf men from the earth. The plane will help to spread disease and death. I will show you some of my experiments. I have rats the size of ponies; frogs as large as dogs; and I have several serpents—well, you shall see!" His eyes were like black diamonds; he seemed to tower to an enormous height with an incredible egomania, a grandiose dementia.

Horror flooded Goodwin as he listened. If this were true, it opened up avenues of gruesome speculation that were beyond words—wholesale death by disease—civilized nations overrun by carnivorous monstrosities.

"I won't listen to that!" said Brownell, rising. "This invention of ours belongs to our government! We can't consent to—"

"Fool!" snapped the aged Fang. "What will your government do for you? I will make you rich—immortal! With me, you will conquer the earth; the world will tremble at your name. Your government will give you a little money and bit of metal with a ribbon on it—and let you starve to death in your old age. I am greater than your government—any government. I can add hundreds of years to your life. Who else can offer you as much?" There was something epic, awesome, in his anger.

AST-6

"Just what do you want us to do?" asked Goodwin.

"You—are sensible," said Doctor Fang again slowly. "Not many men will be honored so by me, but you, because of your skill, will be among the first. To begin with, we will destroy all the dwarf men in the lost province of Manchuria—"

"But, how, doctor? One plane, no matter how efficient, how silent, how skillfully handled, cannot do it! The Japs have hundreds of planes. We will be shot down—"

"We shall see, Mr. Goodwin! Your plane is silent. It can fly at unknown altitudes—at night—no one will see or hear. We will release a little powder in various sections. Unseen—unguessed! Plague and death will clear the land until the last dwarf shall have died. Then the same thing over the islands of Japan—"

"But others will die with them in this horrible way!"

"That cannot be avoided. It is the fortune of war. Ultimately, we shall have accomplished the greatest good for the greatest number. But enough of this now. You must be hungry. I shall see that you are fed and housed as becomes my lieutenants; and to-night, we shall talk!"

THE DAYS THAT followed were as strange and bizarre for the two Americans as pages out of the *Arabian Nights*. An amazing spectacle was unfolded to their sight: a great empire, welded together in this unknown "roof of the world," by the dominance and genius of the fantastic Doctor Fang—genius and madman in one.

They were well and courteously treated, well housed and fed, but guarded, unobtrusively, day and night, by several of the armed, huge Ngoloks. They saw the awe and

reverence with which distant chieftains came to pay homage to the "Living Buddha," groveling in the dust on their faces before the uncanny presence of the incredibly aged Fang, offering him presents wrapped in the "kadakh" (ceremonial scarf).

They watched, unseen, with Doctor Fang's consent, his mysterious dignity as he sat on his throne before the huge idol. He actually seemed graven in stone, ageless, as his followers believed him to be; a soul that had lived down through the centuries in different bodies. They came in fear and awe, for to them he was actually God, master of life and death; and they babbled in terror for forgiveness. Doctor Fang was truly secular and temporal master of the land—from the natural frontier where the five-thousand-foot highlands of China end and the ten-thousand-foot main table-land of Tibet begins—a vast empire unknown to the western world.

With startled eyes, they beheld five thousand chanting monks in the great, pillared hall of the main temple, going through a weird ceremony, dominated by Doctor Fang, in yellow silks and satins, the sacred miter of a living Buddha upon his brow. They learned, with amazement, that Lhadrang Gomba housed over thirty thousand monks and lamas; that the other "living Buddhas" of Lhassa, Chetang, Shiu-den Gomba, and other great central lamaseries, all paid homage to Doctor Fang. They watched the grotesque "Devil Dance" of the masked sorcerers, horrible to the point of dementia.

They saw the reverence bestowed upon the huge mountain that loomed behind the lamastery, which was referred to as "*Amnyi Machin*." Doctor Fang told them that this meant

"Great Peacock," and that it was revered as a god; that it was the highest mountain in Tibet, topping Mount Everest by over a thousand feet.

It was all a weird tapestry of nightmarish fantasy, utterly foreign and unassimilative to occidental thought and understanding; yet it was terrible real. Brownell, hypersensitive, nervous, rebelled instinctively and was sullen. Goodwin, with adventurer's blood in his veins, took it all as a matter of course and was, therefore, in better grace with the inscrutable Doctor Fang.

"You see," said Doctor Fang, one evening, "that my forces, my organization, are almost complete. I need only a few of the mechanical inventions of the western workshops to rule the world."

"Impossible!" said Brownell. "It's a dream—nothing more. Don't count on me."

"So?" said the doctor, suavely, and a murky lightning flashed in his somber eyes. "I am afraid that you are a natural rebel—and a fool—despite your scientific knowledge and mechanical skill. I have taken you into my confidence, treated you as a trusted lieutenant, offered you what amounts to immortality, and yet you rebel."

"It's just that he recoils from the horrors of war," hastily put in Goodwin. "And he wants to go home—he has many ties—"

"What are human ties?" scoffed the doctor. "Companionships that last for a moment of time! Here, we shall watch the ages go—and we shall dominate them! I have built here another Vatican more powerful than that of Rome—"

"The Vatican wouldn't contemplate war and destruction!" began Brownell heatedly.

Doctor Fang chuckled. "That is beside the point. The plane is now in my laboratory, and we shall begin immediately to build several duplicates."

"And you have the facilities?" asked Goodwin.

"Assuredly! There are forges and burners, steel and iron and trained men to follow your instructions. There is a laboratory as modern as any in the western world. You, Mr. Goodwin, being more malleable and more philosophic will. I believe, convince your good colleague that acquiescence is the wisest course." He knit his brows in thought, the strangely lambent eyes glowing with some flaming, inner fire.

"Imagine!" he whispered, more to himself than to the two listening men. "Soon, Europe will be in the throes of plagues and disease for which her medical men will find no answer. We shall sweep it clean! China will expand. We shall wipe out all the hybrid races to the south. The flower and culture of China will shine again in all its splendor. Genghis Khan came with hordes and a sword. Doctor Fang will come with the unseen products of the laboratory."

In their own quarters, Brownell turned to Goodwin fiercely.

"He's crazy, Jim!" he charged. "In the end, he means to kill us. I can see it in those snaky eyes of his. The man should have been dead two hundred years ago. He's—uncanny! I believe he's telling the truth when he says he's three hundred years old. He makes my flesh creep whenever I'm near him—or he looks at me—"

"Look here!" snapped Goodwin. "Cut that out! No flying off the handle. We're here, and we've got to find a way out!"

"We can't get out! Don't you see

that? We're in the middle of this impossible country, prisoners in this temple, and if we shoved our noses outside, there's thousands of these big fellows to grab us. And Lord only knows how far we are from civilization—"

"Well, hold on, and we'll see. We'll have a look to-night."

THAT NIGHT, however, Doctor Fang called them to his private apartment and pointed to a patently high-powered radio receiver. Static was faintly audible, then an English voice, startling in this bizarre solitude, spoke:

"No trace has been found of the two world flyers, Goodwin and Brownell, since they disappeared. Soviet planes have combed the tundras and mountain ranges of central Asia and western Siberia; Chinese planes, loaned by the provisional government, have flown through the provinces of Sungaria and Sinkiang, but there is no trace of wreckage. It is now fairly certain that the flyers crashed in some inaccessible spot and were killed—"

Doctor Fang switched off the machine. "You see," he said, "to all intents and purposes you are dead to the western world. Soon, you will be forgotten!"

"Where did that come from?" asked Goodwin eagerly.

"2-LO, London," answered Doctor Fang.

"But"—Brownell was white as death—"why can't you let them know that we're alive, at least? We have relatives and friends—"

"It would not suit my purpose, at present," interposed the doctor. "Further, I would suggest that you confine your wanderings to your own quarters. You must not wander around the temple—or outside. I

have extended you unusual liberties—do not abuse them!"

They went back to their own rooms, where Brownell burst out:

"He's mad!" he said. "You can see it, can't you? This dream of his of building a yellow Vatican here is madness—"

"Hardly! I'm afraid it's terribly real, old man! That fiendish old ghoul is telling the truth. God knows how old he is, but he's built up just what he says he has! Perhaps that's why Tibet was forbidden to the outside world for so long a time."

"You believe Fang is actually three hundred years old?"

"It sounds crazy, but I do! The man's a genius, don't overlook that. Look at the animals he has built up with his mysterious serums. That's evidence we can't deny. Surely, you believe your own eyes? Any man who can build up a race of men to over seven feet, and insects to the size of horses, has my respect!"

For several minutes Brownell was silent, then: "I guess the folks back home think we're dead, Jim."

"I guess so!"

"If we could only let them know!" whispered Brownell. "We—ought to find a way to kill Fang! The world would be safer."

"Easily said, but how? He's guarded every minute, and we are, too. And we have no weapons."

Brownell sat in a voiceless apathy for some time. "I wonder," he said at last, with an acute nostalgia, "what the folks are doing at home."

It was shortly after this, that same night, that the giant Ngolok guard woke them and indicated that the master wanted them. They traversed the long halls that separated their quarters from the Ju Kong of the "Living Buddha." Guided through a maze of rooms,

they found themselves at last in a huge, lighted laboratory they had not seen before.

Both exclaimed at the sight. It equaled the great laboratories of the western world. A bewildering array of immaculate paraphernalia caught Goodwin's eyes: test tubes, funnels, filters, spatulas, stills, burners, scales, weighing bottles, retorts, aspirators, crucibles, and desicicators; pipettes, burettes, ovens, blowpipes, thermometers, and many special, queer-looking things, apparently designed for delicate special tasks. His bewildered eyes went to the porcelain tables, tubs and drains, the huge switchboard. From somewhere came the drone of a great dynamo.

Doctor Fang stood by a large porcelain table, and on it was stretched the nude body of one of his great Ngolok warriors. The door closed behind the two Americans. In one corner stood several of Doctor Fang's bodyguards, commanding the scene.

"Come here!" called Doctor Fang. "This is something I want you both to see. I perfected the process. I note that the medical associations of the western world are now stumbling upon the fact that death is not necessarily—fatal!"

"What do you mean?" asked Brownell, his eyes riveted to the huge bulk of the naked savage. "Is he—dead?"

"Well, see for yourself. He was brought here a few minutes ago by my men. He is a trusted lieutenant, and it seems that he died of a broken heart because of the death of a woman. More likely a gastric disturbance induced by grief and alcohol. Savages, dogs, and children take their griefs to heart." His lips curled in a satanic grin, horrible on that aged face. "I cannot afford to

lose him, so I am going to bring him back from the dead!"

"What?" Both Americans said the word at the same time.

Goodwin, conquering a natural revulsion, approached the slab and looked at the dead Ngolok; Brownell followed, hesitant, fascinated, yet repelled.

The savage was dead beyond any doubt. There was no heart action; he was icy to the touch and *rigor mortis* had begun to stiffen his limbs.

Goodwin turned. "He's dead, all right." He shrugged. "When did he die?"

"This evening. Now, would you like to see him live again? That is why I sent for you—to show you that I have conquered death!"

"Well," said Goodwin, "if you can give that life, you will accomplish the impossible!"

"Not quite! Even your occidental scientists know some of the rudiments of restoring life. That slab is electrically wired. First, I'll restore heat to the body—he has been dead for several hours. Then we fasten these electrodes to head and feet—so!"

They watched in silent, fascinated horror, while Doctor Fang hung over the cadaver, like some unwholesome, gaunt vampire, arranging his queer, surgical instruments, working deftly and swiftly. Presently, he spoke again:

"Watch! Mild electrical charges and injections of my—er—my own stimulating drugs; then the major operation—this long hypodermic is introduced directly into the tissues of the heart."

Absorbed by the gruesome spectacle, repelled, they watched the aged sorcerer work, his wrinkled hands fluttering over the corpse with a precision and a certainty that told of his genius.

"This man," droned on the cavernous voice of the aged Fang, "is medically, biologically, physically, legally dead. A physician would so pronounce him. Now—watch what happens!"

FANG STOOD TO one side. A lambent flame played from the ends of the electrodes; as the minutes sped, a slight twitching occurred in the muscles of the legs; the tendons of the fingers jerked. And, unbelievably, the skin changed color slowly; there was a faint pulse visible over the man's heart. Goodwin held his breath with difficulty. It was unearthly—and then, the Ngolok opened his eyes.

Brownell gurgled something inarticulate in his throat and turned away, staggered to a seat. Goodwin stood as in a trance. He knew that the Ngolok had been dead; and now he looked at them with reason in his fierce eyes. In the silence of the laboratory there was something forbidding, eerie, overpowering, in the prone, naked figure, snatched from death by the wisdom and skill of this aged Chinaman, who stood there like a towering specter of evil, his age-wise eyes glittering with triumph.

The Ngolok was released, staggering, weak, bewildered, but alive. He would return to his tribe, and his resurrection would add another miracle to the "Living Buddha." He could restore life to the dead at will.

"I have restored many to life," Doctor Fang was saying. "Death shall not conquer where I wish it otherwise!"

"And this process," whispered Goodwin, awed, "will restore the dead to life?"

"Where the heart has ceased to beat as a result of disease or major surgical or accidental shocks. Even

wounds causing death have been healed after the patient has been restored to life—providing that the heart itself has not been injured or any of the vital organs completely destroyed or severed." He paused and watched Goodwin through inscrutable, flashing eyes. "Perhaps you begin to understand what a boon I confer upon you in prolonging your lives—in offering you what amounts to immortality."

He launched upon his fantastic plans with a fervor that displayed the multiform intelligence of his mind, but which still showed the sinister thread of ruthless cruelty that traversed it.

"To-morrow," he finished, "or the next day, we will inoculate you both with the same serum I gave my Ngolok. In two years, you will grow in size, you will be over seven feet high! Being young, you are the best possible subjects. I have never before tried this on members of the white race. It will be interesting!"

Late that night, unable to sleep, Goodwin turned to Brownell.

"I'm going to make a try for it," he whispered. "I'm going to get out! I'd rather die in the open making a fight for it, than let that yellow devil practice his weird experiments on me."

"How are you going to get out? Those Ngoloks are nothing to play with—and the immediate neighborhood is full of those damned, built-up insects and animals of Fang's. If we bump into some of those things—good night!"

"I'm going to smash that guard when he looks in here later," answered Goodwin. "I'll use the bench. When I get his pistol, we'll tackle the other one in the hall. Are you with me, or will you stay while that old ghoul pours his uncanny liquids

into your veins trying his horrible experiments?"

"I'm with you, of course, Jim."

Some twenty minutes later, the Ngolok stalked into the room. From his position near the door, Goodwin brought the bench down on his head with a sickening crunch. The big savage collapsed. In an instant, Goodwin had his pistol and was tying him up with scarfs. They had made little noise, but they paused to listen before they ventured out into the hall. Black, hostile silence greeted them. A faint shadow to one side attested to the guard in the hallway.

Once committed to the attempted escape, Goodwin put all his energy to the task in hand. He crept to the side of the drowsing savage and struck hard with the butt of the heavy pistol. The guard slid to the floor with a harsh gurgle and lay still.

They made their way silently toward the entrance of the temple.

Just as they were congratulating themselves that they would get out without being seen, a door opened to one side, and the towering figure of Doctor Fang stepped out into the hallway—alone! He paused and looked at them in startled surprise, then his voice rasped:

"What are you doing here? What is the meaning of this? Haven't I given you strict orders—"

Brownell's pistol stabbed red flame in the gloom of the early morning, and the sharp crack echoed down the hallway.

Doctor Fang tottered, swayed, mouthing inarticulate rumblings, tried mightily to raise his voice, and fell. He lay silent.

"Now you've done it!" gasped Goodwin, kneeling by the fallen giant's side. "He's dead! Good Lord—right through the heart!

Well, there's no one here who can bring him back to life! Phil—it's now—or never! Take his ring and his miter. Maybe we can use it to get through. We've got to make it now!"

"I'm glad of it!" agreed Brownell. "The uncanny devil! He had no business on earth. He won't plan any more world conquests and be the cause of millions of deaths! I know where the horses are kept, Jim—let's go!"

SEVERAL MONTHS LATER, an unbelievable tatterdemalion, with a white beard and snow-white hair, came staggering down the hard slopes of Bhutias Pass.

The women porters, who carry baggage from the toy train that runs to Darjeeling from Siliguri, saw the man first. They were coming up the mountain path with a load of baggage for a titled English visitor to the Mount Everest Hotel, perched high above Darjeeling on the slopes that lead to Everest and Kanchenjunga. Dim, misty with distance, the two great peaks tower above Darjeeling fully twenty-two thousand feet; for Darjeeling is only at the seven-thousand-foot level.

The stranger was white, undoubtedly, heavily bearded, white-haired, and he mumbled a bizarre tale of flying into the wastes of the Himalayas; of a companion who had

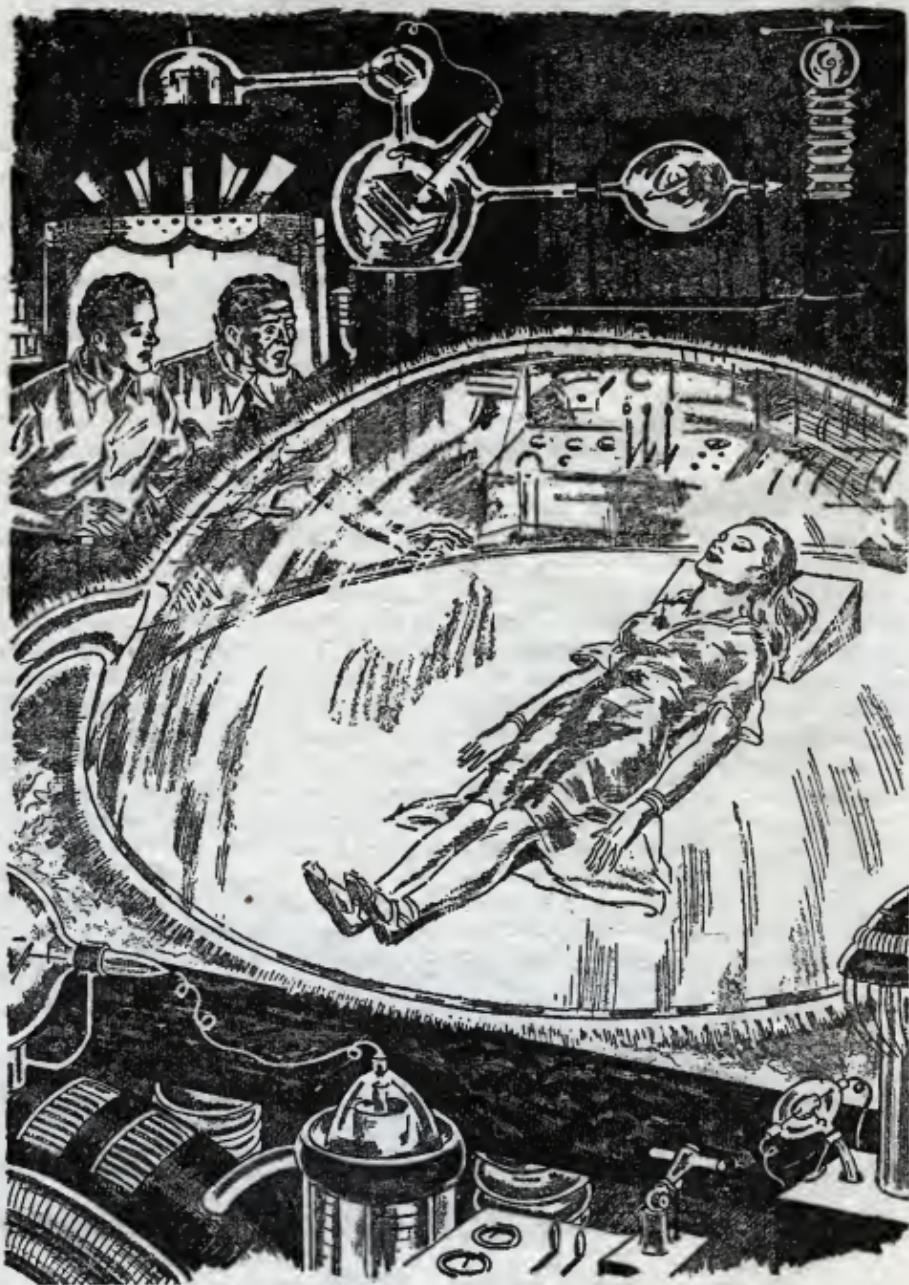
died in the hills; of a heart-breaking journey through the storm-swept valleys; of a three-hundred-year-old Chinese sorcerer who had planned to dominate the world—in fact, his story was so strange that he was put to bed and a physician was called.

The Darjeeling newspaper later commented on the white stranger who had so mysteriously appeared from the forbidden mountains:

DARJEELING, India. Sept. 18.—A. P.)—The white wanderer who came out of the mountains so mysteriously last week gave his name as James Goodwin, and he claims to be an American. He informed the press that he was one of a team of world flyers who had made a forced landing in the Himalayas. He claims that they were pulled to earth by the antenna of a broadcasting station in the remote mountains. This was put down by his listeners as a figment of the imagination. His story is so strange in its entirety, that fears are felt for the man's sanity. He is being closely guarded and watched, as the attending physicians are of the opinion that his reason has collapsed. The extreme privations he has undoubtedly suffered may have been the cause of his utterly unbelievable story. An attempt at identification through the American authorities is now in progress.

Daring, strikingly original ideas are the life-blood of the new ASTOUNDING STORIES. "Brass Tacks" is the laboratory where YOU may test and challenge these ideas. Write in!

• There in that transparent globe I saw her—thousands of feet under the earth!



The Flame From Mars

by JACK WILLIAMSON

illustrated by M. Marchioni

METEOR CRATER is a thing strangely, darkly desolate. You may have seen it, a livid unhealed scar on the barren waste of Arizona desert, forty miles east of Flagstaff—it lies some six miles south of State Highway 66.

If you have seen it, you must have felt the bleak loneliness of the sere surrounding desert. You must have been repelled by the alien hostility of its wild, shattered ramparts. You must have wondered at the ancient cosmic cataclysm that tore this mile-wide pit, ringed it with a hundred-foot barrier of broken rock.

Meteor Crater has—for me, at least—the same awful wonder and the same wild, archaic mystery as the ring-shaped craters on the moon.

Many excellent descriptions of it have been published. But this, I believe, is the first news to appear of Don Belgrand's mining operations there in the past six months, and of the "meteor's" true nature—it turned out to be no meteor at all. Even now, Don won't allow me to use his real name, which is one far better known to American readers than Belgrand.

Until six months ago, tourists who braved the deplorable road could pay twenty-five cents to a girl on the rim and look down into the six-hundred-foot pit, its brown floor leprosously patched with the strange, snowy sand that came from the abandoned shafts.

I climbed down into it, six months ago, with Don Belgrand. We scram-

bled down over naked rocks tumbled and shattered and half fused by that stupendous cataclysm of forty thousand years ago. A stiff undertaking, it was, for a man of fifty; I felt the twinges of it for a week.

The bitter, archaic loneliness of it, the bare harshness of the cragged, vertical walls that had swallowed us, its brooding air of ancient, hostile mystery, made me very anxious to be out of it again—and very reluctant to see good Belgrand money spent within it.

But Don Belgrand had come off his yacht, the *Western Belle*, with an option on the mining lease. He came into possession of it, somehow, I think, in a poker game on board—Don is no gambler, but he did inherit his father's instinct for poker. Anyhow, he hauled me out of our New York office the day after he docked, brought me by air to inspect the crater.

"I tell you, Red," he insisted, "there's *something* here!"

Tall and powerful, Don is, with the narrow hips and wide shoulders of a fighter. He has the gayest smile and the most winning manner I ever knew—they would make him welcome anywhere, without the aid of the Belgrand millions. But he has his father's eyes, sober and steady and gray, and, behind the careless ease of his manner, all his father's common sense.

"Yes, there's something here," I agreed. "Anybody could see that the thing was made by a falling

body. Even the Indians had a legend, I believe, that an evil god fell out of the heavens and buried himself where we're standing. Personally, I feel as if he's still haunting the place. There's something here, all right. And here is a mighty good place for it to stay."

But Don's scientific enthusiasm had been fired. I hope I haven't given the impression that Don is just a useless playboy. Most young men would have been, with all old Bill Belgrand's millions to spend. But Don has worked harder than most young men. He had made himself a real scientist—a metallurgical engineer. I know of a dozen firms that would be eager to employ him, almost at his own figure.

"The thing weighs millions of tons," he told me. "Nickel-iron, with small quantities of gold and platinum and iridium. The fragments they've found prove that. There's a fortune here!"

"Yes?" I said. "Sunk in these abandoned holes!"

I pointed at the long-deserted shafts, at the scattered, rusting pieces of hoisting machinery that were like red skeletons, at the leprosous-white heaps of strange quartz sand.

"And they haven't found anything," I added, "but that shattered, floury quartz and water that rises faster than they can pump it out."

"Lucky for us the water's here, Red," Don protested airily—my name is Ared Stokes; he persists in contracting it to "Red." "If it hadn't been for the water, somebody else would have had the thing out years ago. A couple of multistage centrifugal pumps—"

"Would," I finished for him, "cost a lot of money."

"It's your job," he reminded me lightly, "to make money. And mine

to spend what you make. I'm not complaining. But it does keep me hopping to stay even with you!"

I gave up. It's true I manage the firm, and old William Belgrand left it in such sound condition that it can't help paying dividends, even in times of depression. Don has never taken very much interest in his millions. Not much even in spending them, except in some such quasi-scientific project as this.

I spent the rest of our visit staring up at the twisted, battered, naked precipices that frowned down at us from every side of the pit, wondering blankly about the cataclysm that flung them up. The alien mystery of the crater, its cruel, stark desolation, was getting on my nerves.

Before we were out of the pit, Don made up his mind to exercise the option on the mining lease. I didn't approve, and told him so. He merely grinned, and informed me that he wanted another hundred thousand, for a preliminary survey.

I WENT BACK to New York. For two months I didn't see Don, and heard from him only when he needed more money—which was often, for the meteor-mining adventure seemed ill-starred from the first.

Millions of gallons of water poured into his shafts; he designed and installed special pumps, in an effort to drain what seemed to be a subterranean sea—and pumps cost money.

The strange, powdery quartz sand caused endless difficulties, caving into the tunnels, until Don invented a new—and expensive—machine to line them with reinforced concrete.

The "meteor" proved amazingly elusive. Learned geologists discussed the dynamics of impact, and

gave opinions—expensive opinions—about where it lay. Don drove tunnels—very expensive tunnels—and proved that the opinions were about as good as mine, which was that the sooner we quit the better for Belgrand, Inc.

Don, however, has never been able to tell when he's beaten. Nor will he listen when anybody else tells him he is. He kept on. He sent the geologists away, and followed his own ideas, with the aid of a sour-faced little Scot named MacQueen. They drove the concrete burrows on through the débris of crushed rock under the floor of the crater.

At last I had a wire from Don:

METEOR FOUND. NOT A METEOR. COME AT ONCE.

I found an amazing change in the crater. There was a new, splendid road from the highway, that wound over the rim and down to the head of the principal shaft. New, silvery sheet-iron buildings had replaced gray desolation. Great Diesels drummed incessantly. The pit after dark was a cup of electric light.

Both tense with nervous elation, hollow-eyed for want of sleep, Don and grim-visaged MacQueen took me a thousand feet down the shaft and out through a net of gray tunnels to the discovery.

It was a wall of grim black iron, pitted with forty thousand years of corrosion. Men were busy with oxyhydrogen torches, but they found the dense, tough nickel-iron alloy almost impossible to cut.

"Three inches in three days," Don remarked. "I want another hundred thousand, Red, to find some way to cut through this wall."

I was beginning my usual, useless protest, when he went on:

"But it wasn't that I wanted to

tell you, Red. I can wire for money. I wanted to tell you why the thing was so hard to find."

"Yes?"

"The main mass isn't in the bottom of the pit. And it never was. It had a fender! Some huge structure, that tore the crater in front of it, and collapsed under the main mass, to break the force of its fall. It wasn't, Red, a meteor at all!"

"What, then—"

"A projectile!" Feverish, strained excitement burned in his gray eyes, trembled in his voice. "It was a shot, Red, fired to the earth across space from another planet! With an immense fender to break its fall, preserve whatever is inside!"

"Another planet!" I protested. "Are you crazy, Don?"

"Nearly," he said, and grinned. "But I mean it, Red! The thing was shot from Mars, I'm sure. The Lowell Observatory fellows, up at Flagstaff, have convinced me that Mars has life older and more intelligent than the earth. Their irrigation system—"

He broke off, and grinned at me again.

"I guess you think I'm pretty wild, Red. And I am. Wild to get through that wall!"

I stayed for a day, even caught some of their feverish agitation. Don had driven a net of tunnels about the thing, following the curve of it, exploring its rugged black iron surface. The Shell—they called it that—was almost a perfect sphere. It was hugely massive, nearly two hundred feet thick. I felt their eagerness, yet I was somehow skeptical that the nickel-iron crust contained anything but more nickel-iron.

Then I had to go—what with the depression, Don's enormous expenditures had got the firm into a con-

dition that kept me busy. It was nearly four months later that I received his imperative telegram:

**DROP EVERYTHING. COME.
I NEED YOU.**

I came. One early morning a hired car brought me out from the town of Winslow, across gray, bleakly featureless desert, toward the strange, ring-shaped wall of age-old débris that hides the meteor-mine. At the new buildings in the bottom of the pit, under the sinister oppression of the tumbled, cragged walls, I found Don, for a miracle, asleep—it was the first time in three days, said dour old MacQueen, that he had been in bed.

IN A FEW minutes he appeared. I was distressed to see that his broad shoulders sagged a little under some intense nervous strain. His grin was stiffened by a strange, anxious tension. Brooding in his gray eyes was an agony—a longing and a dread.

We breakfasted together in the little shack beside the shaft. The meal was good—Don's Chinese cook had come with him from the *Western Belle*. But Don displayed no appetite; he was weighed down with a silent, apprehensive indecision.

"How's it coming, Don?" I had to ask him. "You wired, months ago, that you were inside. What did you find? Is the thing actually—hollow?"

His gray, steady eyes looked at me, haunted with strange dread.

"Yes, Red, it's hollow," he said slowly, almost wearily. "Or it has a chamber in it; it's mostly solid metal. It's really a shot. It was fired from Mars."

His manner was as astounding as his words. His old eagerness was

gone. He was tired—frightened—in an agony of doubt. Outright, I demanded:

"Tell me, Don, what's the matter? You look almost sorry you found the thing."

His tortured eyes stared at me; he made a feeble attempt to grin.

"Fact is, Red, I am. I wish the ace that won me that infernal option had been a deuce!"

"Well, if you feel that way about it, the sooner we quit the better. We can salvage the machinery and try to sell the lease. A few millions gone, of course. But what's a cool million or so?"

He ignored my intended irony.

"We have to abandon the thing," he told me soberly. "It isn't that that bothers me. A new flow of water broke into the shaft yesterday. It's carrying sand. Just a matter of hours until it clogs the pumps. Then—we're done!"

"In that case, I don't see any choice except to salvage as much machinery as you can, and get out."

His queerly tragic eyes looked at me; he tried to grin.

"But there *is* a choice," he said. "In fact, a hell of a choice! That's why I sent for you, Red. I hoped your hard-headedness would make me snap out of it!"

"If you want my advice," I told him, "I wish you'd explain the situation a little more fully."

"I can't *explain!*" cried Don. "Lord! You wouldn't believe me if I did. I tell you, Red, it's a fantastic mess! But I can *show* you!"

I left my breakfast—Don had eaten nothing—and we hurried to the top of the shaft. We met shriveled-faced little MacQueen, furiously bustling about, chewing the ends of his mustache.

"Ye ain't going down again, Mr. Belgrand?" Apprehension was in

the question. "The sand's getting to the pumps, I tell ye! They may stop any minute. Ye'll be trapped before ye know it!"

"Mr. Stokes and I are going down," Don told him. "We have to."

He muttered protestingly, and I felt a chill of dread at the outlook. But Don dragged me into the cage; it dropped sickeningly under us, stopped as suddenly. Don led me off at a trot down the narrow, gray-walled drift, through eerie silence and cold, tomblike damp.

We came to the black, curving, rough-surfaced iron wall of the Shell. A guard stood in front of it, a thin little dwarf of a man, in an enormous leather coat. He held an automatic shotgun.

"Better get out to the cage, Tenbow," Don told him briefly. "The water will be here soon."

"Thank you, sir." Relief was in his voice.

"Don't let anybody pass except Mack."

"All right, sir."

The leather coat moved aside; I saw the entrance to the Shell.

A round, thirty-inch hole, drilled into the nickel iron. It was smooth and bright as the bore of a mammoth gun. Insulated wire was strung into it. It had cost Belgrand, Inc., three hundred thousand dollars.

In front of it, in a kind of cradle that ran on a track, was a huge steel plug, eight feet long, milled to the diameter of the bore.

"We'll seal it up with that," Don told me hastily, "when we're—through. A flick of that lever, and the motors drive it in." And he added, with unexpected vehemence: "I wish I'd pulled the lever the moment we got it finished!"

He squirmed into the hole. I

wasn't eager to follow. I was cold with the chill of alien, mysterious evil that dwells in the crater; sick with fear that the rising water would trap us.

But I did follow. Anxious curiosity was aflame in me. And, anyhow, I couldn't have deserted Don, so desperately troubled.

For seventy feet, I suppose, we crept through that very expensive bore. Then Don vanished. I looked into the chamber in the iron. It was flooded with the glare of Don's harsh electrics.

Six-sided, it was, the roof slightly domed. Perhaps forty feet across, twenty in height. Lined with something smooth and glistening, like green enamel. The bore pierced one wall some ten feet above the tilted floor; a ladder had been set under it.

FOR MINUTES I gazed, astounded at the tremendous reality of contact with an alien world. The full wonder of it burst upon me only when I saw that green, six-walled room in the globe of iron.

Machines, in the corners, shimmered fantastically under the brilliance of Don's lights. To me they looked as weirdly incomprehensible as objects of the fourth dimension. They were mostly of some white metal that had a strange, faintly blue cast.

Piled high against one green wall was—treasure inconceivable. A colossal black coffer heaped with strange gems—jewels of a foreign world. They flamed with weird witch fires. Wondrously, they scintillated with red and yellow and blue, with purple and green, with colors never seen on Earth before.

Above were stacks of metal ingots. Queer thick bars of silver, of xanthic gold, of argent platinum,

of some pale-green metal new to Earth.

I was staggered at the stupendous value of the hoard. It would have repaid our expenses a hundred times. But Don evidently had not disturbed it, and now it would be too late to remove it.

But the most amazing thing in that green, hexagonal, iron-walled cell was neither shimmering mechanisms nor weird, incalculable treasure. It was the woman.

The Flame Woman!

In the middle of the green chamber was a broad black platform. It was covered with a dome-shaped shell, transparent as glass. Under the crystal dome, bathed in a kind of rosy mist, lay—Allurova!

She was reclining on a black, simple couch. Her limbs were drawn up in the position of natural sleep. She was covered only by the sheerest, scantiest garment of something that looked like spun silver.

Beautiful, she was, beyond all imagining. Her fine skin was the color of pale coral. Her sleeping body was like an exquisite jewel cut out of coral. Her thick hair and her narrow brows were dark.

I stared at the motionless girl. Her still, lonely loveliness brought a quick ache to my throat. The green, amazing chamber swam in front of my eyes. For one bitter moment I longed for youth again.

At the bottom of the ladder, Don was staring, too.

Adoration was in his gaze. A love so intense it was painful to see. With it, dragging down his very soul to bitter depths, was black despair. And a cold, naked dread that chilled me.

"Wake up, Don," I called down, to arouse him from the agony of that fascination. "You're the prize catch left in the sea—you can't die

mooning over a mummy forty thousand years old!"

"Mummy? Mummy!" Tortured gray eyes looked up at me. "She's more alive than I am! She—she's immortal, Red!"

He held the ladder for me to climb down to the floor of the green chamber.

"Immortal?" I demanded. "How do you know? How did she come to be here, anyhow?"

"Her name is Allurova. She was a princess, on Mars. Allurova. And they gave her another name, that means Flame Woman."

"But how in the name of common sense did she come to be here, buried inside a million tons of iron?"

"She was shot away from Mars," Don told me slowly, "because she is—terrible! I told you it was a weird mess, Red. The rulers of Mars shot her out into space, because she was about to wreck their civilization!"

I demanded, then, as incredulity conquered my amazement: "How do you know all this?"

He turned to one of those weird machines, that was crowned with a black cube, yard-square, shimmering like polished jet. As if quite familiar with it, he touched some control that started a low, whirring hum.

Then, before I knew what he was about, he snapped out the electrics. Darkness fell on us like a terrible, smothering flood. I cried out. I remembered we were a thousand feet underground, under seventy feet of iron, with subterranean waters rising inexorably upon us.

"This thing," Don began, "is a little like a movie—"

But I wasn't listening. I was staring at the Flame Woman—now I understood the name. She hadn't vanished into darkness with the rest of the weird room. Under the crys-

tal dome that was like a great bowl inverted, Allurova was still visible.

Her pale, matchless body shone with ineffable radiance, uncanny, unearthly. She was a jewel of coral flame. Her whole perfect body was permeated with supernal fire. The soft glow of her faintly lit the rosy gas about her, under the dome.

She was drenched, saturated, with a visible, vibrant energy.

A moment I was speechless, half with the sheer wonder of it, half with a new, blood-quickenning admiration of her unutterable beauty, flaming against subterranean gloom. Then I cried out to Don:

"Look! She's—shining!"

"That's why they call her the Flame Woman," he told me. He was still busy with the mechanism. He said abruptly: "Watch the cube."

I tore my eyes from the weird, burning wonder of Allurova, to look at the black cube.

It was flushed with gray. A faint mist of silver-gray was born in it, and filled it, and became brighter, until it was a cube of silver flame.

A bell note pealed from the instrument, clear, deeply golden. Its liquid reverberations trembled and shattered into silence. And the silver light ran out of the cube like molten metal.

It left the figure of a man. The cube was invisible; the figure seemed to stand before us, on a little argent table. It was only two feet high; only, I knew, an image. But no reality could have been more vividly real.

It was an old man, robed strangely and in white, with the grave stamp of an austere power upon his solemn face.

He gestured for attention, with a manner of serene authority. His lips moved. He spoke. His voice rang

clear in the darkened chamber—though I knew it came across forty million miles of space and forty thousand years of time.

Don touched another lever. The voice stopped. The molten silver rose again, filled the cube, faded to blackness. The humming ceased. Don—to my relief—snapped on the lights.

"You see, now, Red, how I know."
"You could—*understand?*"

"It's something like our talking pictures," he swiftly explained. "There are dozens of records. The first were picture lessons in the Martian language. The speaker pointed out objects, and named them, and illustrated the meaning of verbs. Then there were lectures on the history and the art and the science of Mars. The thing's tremendous, Red! Three months, I've been working on it, twenty hours a day. And I haven't even begun. But this water, drowning us out—

"But I was going to tell you about Allurova."

HE LOOKED at the fantastic, beauteous sleeper, and his haggard face was terrible again with longing and despair and dread. He made a visible effort to regain control of himself, turned back to me with a muttered, explosive "Damn!"

"That was the last record," he said swiftly, as if thinking of the rising cold flood. "The man speaking was the ruler of Mars, telling the story of the Flame Woman, for the benefit of any one who might enter the Shell. And giving a warning against waking her.

"Anyhow, Allurova, I told you, was a princess of the planet Mars. Their civilization is—or rather was, forty thousand years ago—on a level with ours. They were far ahead of us in engineering. Had to be, to

handle those irrigation projects. But we haven't time for a lecture.

"Allurova's mother, Red, was a distinguished scientist, as well as a personage of rank. Her father was much less admirable. He dishonored his wife, squandered her fortune, finally attempted to poison her. The plot failed, and the man departed with one of the slave girls and the valuables he could lay hands on, shortly before Allurova was born.

"The mother's body was always tortured and disfigured from the effects of the terrible poison he had used—only her science had saved her life. She never got over her broken heart and her bitterness against men.

"Allurova grew up to be very beautiful—you can see that for yourself, Red. And her mother was tormented by a fear that the girl would be misused as she had been. She taught the girl to hate all men. And she used her science to insure Allurova's safety—but in a terrible way.

"She made a dreadful destroyer out of her daughter, to avenge upon all men the injury she had suffered at the hands of one.

"She discovered a strange energy. Probably a radioactive emanation, perhaps electronic in nature—that's what the other Martian scientists thought. Anyhow, it disintegrates organic matter. It destroys molecular cohesion, makes matter crumble to an impalpable dust.

"She charged Allurova's body with that. With the Flame! She increased the charge very slowly, so that a natural resistance was built up in the tissues, to keep the girl herself from being harmed.

"The Flame stopped all change. It stayed the effect of time. It kept the girl eternally young. She's im-

mortal, Red! And it refined her loveliness until it was—supernal!

"The mother killed herself, then, to end the agony of the poison and the torture of her twisted life. She left Allurova to avenge her. Lovely as an angel—you see her! But a curse, a destroyer!

"She despised men, hated them. And men came to her, fascinated by the lure of her terrible beauty. She welcomed them, opened her arms to them—in mockery! Her slightest touch was death.

"A dizziness. A quick, burning fever. An agony of pain that consumed every tissue. Wriggling, hideous death, in a matter of hours. The disintegration did not cease until the flesh, even the skeleton, had crumbled to gray, ashy dust. Her beauty annihilated them!

"But the girl was no murderer, Red! She wasn't to blame for the thing. You can't feel anything but pity for her. She didn't hunt men to destroy them. She lived in a lonely palace her mother had built, far out on the red, stony desert of Mars. When men came, she warned them that she was Death. But her beauty was a living flame they couldn't resist—I guess you aren't too old to understand that, Red?

"Anyhow, year after year she lived on, never older, never less beautiful. A burning lure in the desert. Hundreds came to her—and fell to gray dust. The flower of Mars! The keenest of her young scholars and the finest of her athletes and the bravest of her fighting men.

"The rulers of Mars hoped, at first, that she would love some man. Her mother had left her the secret of the Flame, so that she could free her body of it and become an ordinary mortal again. Each of her victims, I guess, expected her to spare

his life, and sacrifice immortal youth for his sake. But she didn't!

"Then the council voted that she was a menace to the state. It was decreed that she should be imprisoned—unless she gave up the Flame. She refused to do that. They took her to the great prison at the edge of the south polar cap. But the arrangement was not satisfactory—her guards were fascinated by her beauty; they came to her cell and touched her and died. No one could resist her allure.

"No crime could be charged against her. Not one death was due to her own intention, to malice on her part. She had always warned the men who came to her, tried to avoid them. But, as the best young blood of Mars continued to be carried away, the council made a special decree that, unless she gave up the Flame, she should be put to death.

"She wouldn't—she must have a pride, Red! But nobody would execute the sentence.

"The oldest soldier, the most hardened executioner, having seen her beauty, would not destroy it. At last women were sent—even a woman whose lover had died at Allurova's touch. And even that woman could not end her unutterable loveliness.

"So the council, at last, commuted the sentence to one of banishment from the planet. The girl still refused to give up the Flame. So this sphere was built, with a colossal fender designed to check the force of its impact, prevent injury to Allurova.

"Still proudly and scornfully defiant of the men she hated, Allurova was sealed under that crystal shell, that is filled with a harmless vapor of sleep. The entrance to the Shell was sealed with molten metal. And

she was shot across space, to the Earth—forty thousand years ago!

"And that message from the ruler of Mars, Red," Don's tense, racing voice concluded, "—I've been quoting it almost word for word—ends with a warning:

"Let Allurova sleep! She is beautiful. But she is death. Because of the terrible thing one man did to her mother, she hates all men. Her loveliness is the mask of a terrible destruction. And you, who think that she may love you, and give up for you eternal youth—remember that the same thought has sent many another to death. Let the Flame Woman sleep!"

DON'S strained voice stopped; his tortured eyes went back to the supine, motionless form of the fair girl whose weirdly fantastic story he had told.

"And now, Red," he added abruptly, "you see the choice. To go out and plug up the Shell and let the water cover it forever. Or to wake Allurova."

I shook off my bewilderment.

"Wake Allurova?" I cried. "And enjoy the sensations of crumbling slowly into gray dust! Would one kiss be worth it?"

"By George," Don whispered, still staring at the incredibly lovely being, sleeping under the dome, "I believe it would!"

I stared at him.

"Don't be an utter fool!" I protested. "According to what you say, she's as deadly as—as a cobra! Even if she took mercy on you, and gave up the Flame for your sake, what would you have in common? You may know her language and a little about her civilization. But all her ideas and values would be different, alien. How would she fit in with your social set? Picture her as Mrs.

Donald Belgrand, entertaining with a bridge party, or receiving your friends on board the *Western Belle* or—”

“Lord! Stop it, Red!” Don ejaculated suddenly. “I wish I could! But, as for the smart set and bridge parties, I’m fed up with them, anyhow. Of course, I know you’re right, as far as common sense goes. I sent for you, so you could tell me just what you are telling me. But, Red, I—I love her!”

“Love?” I said. “When you’ve never even spoken to her? When you’ve just looked—”

“I thought you might shake me out of it, Red. But it’s no use! I’m going to wake her up!”

“Don, remember—”

“No good remembering, Red, when you’re on fire inside. But thanks.”

He gripped my hand quickly. I knew the pressure of his grasp meant—farewell. He left me, strode eagerly to the glass dome. Nor, looking at the wonder of Allurova, glorious under the rosy mist, could I blame him for the insanity of his choice.

He spun a little dial at the edge of the black platform. The rose-hued gas thinned. It swirled, eddied, was drawn away. And Allurova woke.

Coral-pink breasts moved as she breathed. Her exquisite limbs straightened. With an incomparable grace, she sat up quickly on the black couch, violet eyes open.

Sleeping, she had been more than beautiful. Awake, she was a consuming flame of loveliness.

Eagerly, Don spoke to her, through the glass. His voice was breathless, choking; an agony was in it. I was amazed at his apparent fluency in the melodious Martian tongue.

Allurova’s answer rang back through the crystalline dome. It was pure melody and bright flame of silver and joyous madness. Her violet eyes looked at Don’s clean, straight body. She smiled. Her smile was delight beyond utterance. She was irresistible.

Don stepped forward, close to the dome, and they talked—until I was half mad, torn between terror of the insidious, silent flood of rising water and the wish to take Don safely away with me.

Bewilderment was followed on the girl’s face by awed understanding—Don must have told her that she was forty million miles and forty thousand years from the world she had known.

Burning hope, on Don’s face, gave way to desperate despair and equally desperate determination. His hoarse whisper, in a moment, confirmed my dreadful intuition:

“Well, Red, she won’t give up the Flame. Not that you could expect her to sacrifice immortality for me, on five minutes’ acquaintance! But I’m going in to her, Red.”

“Don’t!” I pleaded. “Come—”

He cut me off, with a terrible urgency: “No use, Red! And you’d better go pretty soon. The water must be nearly up to the drift. Have Mack drive in the plug, before he goes out.”

“Don—” I began, but he had forgotten me.

He had turned again to Allurova. On her face was scornful pride, and real pity. I knew she was warning him that she was—Death.

Don answered, in a voice that was terrible with its yearning, imperative eagerness.

Allurova rose. She glided with ineffable grace to the wall of the dome. She opened an oval door in the glass, so perfectly fitted that it

had been invisible. She stood there, her beauty a cloak of supernal glory, and extended a hand that was a jewel of exquisite coral—and the slightest touch of that hand, I knew, was frightful death.

Don took that fine hand, gravely, in both of his own. He pressed it to his forehead, in what must have been the Martian manner of salutation.

Abruptly, then, to my amazement—and, I'm sure, to Allurova's—his powerful lean hands seized her half-bare coral shoulders. With unrestrained fierceness, he swept her exquisite body to him. Holding her nearly off the floor, he kissed her dark lips with savage hunger.

She gave a smothered cry, after a moment. She writhed, kicked out, clawed at Don. He laughed a little, challengingly, triumphantly. One strong hand caught her wrists, held them together behind her. The other closed like a vise on her head, turned up her face for another kiss. Her struggles stopped, then, and she answered his embrace.

In a minute, perhaps, he pushed her away from him, still gripping her satiny coral shoulders with his hands. He looked at her. A mockery and a reckless challenge glinted in his eyes. Again, he laughed.

The white wrath on her face gave way to a curious composure. I heard the melodious enchantment of her voice. Oddly, enigmatically, she smiled. And a light was in the glory of her wide violet eyes.

Suddenly gracious, she led him into the dome, seated him beside her on the black couch. The fierce, defiant joy was still on his face. Almost gravely, they conversed for a little while in her strange, mellifluent tongue.

Then, amazingly, stormily, Allurova burst into tears.

It was dreadful to see her cry. She sat straight up; she didn't cover her eyes. Her violet eyes were huge and lustrous with tears. Her coral body shook stiffly with her sobs, as if quivering in agony. Don put his arm around her. She paid no attention to him, and he took it away again, uncomfortably.

Then he looked up, saw that I was still waiting.

"Go on, Red," he called. "The water will catch you, if you don't. Have Mack drive the plug in, to seal the Shell. There's air enough here to last as long as I do. Allurova can turn the gas back in the dome, and go back to sleep."

"Don, do you feel—"

I could not ask the question.

"Nothing much, yet. But soon, Allurova says— Funny thing, Red. She's sorry, already! But it's no use, now. That's what she's crying about. The first touch was enough. And there's no way to stop it. Lord, it's a hell of a mess!"

Even then, he had the ghost of a grin for me. He waved at me, and called, "S'long, Red!" And he looked back at the sob-shaken girl. With a choking tightness in my throat, I stumbled toward the ladder.

I CLIMBED out of the green chamber and through the gleaming bore in the iron, back into the brooding, unearthly silence and the dank, deathly chill of the gray-walled drift.

I hurried toward the shaft, sick with a great fear of the pitiless pressing walls and of the invisible cold flood of underground water, inexorably rising—sick, too, with a numbing grief for the bright youth Don who had surrendered so madly to the Flame Woman's fatal spell.

Dour, grim-visaged old Mac-

Queen met me in the passage, running.

"Time ye came, Mr. Stokes!" he rasped urgently. "Where's Mr. Belgrand?"

"Back yonder. In the Shell." Blind panic swept me. "The water—"

"It's here! A few minutes, now—I'll warn Mr. Belgrand. Ye'll do weel to go on!"

"Don told me—" I gasped. "Don told me—to have you seal the opening. He's going to stay—in the Shell!"

MacQueen glared at me. "Shut him up in that infernal tomb of iron? Are ye crazy, mon? I canna do that!"

He darted past me, ran on toward the back of the tunnel.

On the floor of the tunnel, then, I saw the dark glint of water. A small pool. But the gleam of it was black and terrible. And it spread. Scarlet, monstrous terror caught my throat, drove me plunging toward the shaft.

Wild and blind with panic, I raced through water that came over my shoes. I was afraid I should get lost in the net of passages, die in the black, silent water. But I splashed up, at last, to the shaft and the cage and the little guard named Tenbow, waiting anxiously.

"The others, sir?" His voice was a rasp of fear. "Mr. Belgrand? And Mack?"

"Back there," I panted. "Don will never come! But Mack—"

"You mean Mr. Belgrand is dead?"

"Dying. In the Shell."

"Dying? I'll go."

"He needs no help. But we must wait for Mack."

With a fearful, silent swiftness, the water came up about us. It came to our hips, as we stood in the

steel cage. It shook us with deadly cold. In a terrible soundless torrent, it flowed into the tunnel.

It was flowing to cover forever the tomb of Don Belgrand.

Tenbow looked nervously at his watch. His teeth were chattering with cold and fear. He pulled his leather coat close about him. Anxiously, he peered down the drift, shouted. The answer was a weirdly muted echo.

The water came to our middles. The icy edge of it against our flesh was like a merciless blade. With a dreadful, increasing swiftness, it lapped higher. It came to our arm-pits.

"No use," muttered Tenbow. "They're done for."

He touched a button. The cage jerked us up, out of the water.

But I had heard a splashing, far down the drift. A faint hail.

"Mack's coming," I said. "Swimming."

We dropped back into the water. It came to our necks.

MacQueen splashed into reach. We dragged him into the cage. Then, to my amazement, appeared Don Belgrand, towing Allurova!

"All aboard!" he gasped, and spoke reassuringly to the girl.

The cage hauled us once more out of the water. Five minutes later we were all five thankfully standing in the hot desert sun, by the shaft house at the bottom of the crater's rugged bowl.

Allurova clung to Don's arm. She gazed about, violet eyes big with awed wonder. But her eyes always came back to Don. Admiration was in them, and confidence. And a dawning love.

"Don," I asked, "are you—how are you—"

He looked at me; abruptly, he grinned. To my inexpressible re-

lief, it was his same old invincible grin. All his despair and his haunting dread was gone.

"I believe, Red," he told me, "that I'm not going to fall apart. Something is wrong. The Flame doesn't seem to work any more. I should have been half dead by this time, Allurova tells me. And I haven't felt a pang!"

And the last time I saw Don—it was here at New York, a week ago, when he and Allurova were going on board the *Western Belle*—he was still in remarkably good health.

Of course, not knowing the secret of the Flame, one can't explain its failure to crumble Don's body into

gray dust. But it had been forty thousand years since it killed anybody. There must have been a leakage into space. Radium, even, which loses half its bulk and half its energy every sixteen centuries, would be nearly all gone in forty thousand years. If the Flame was really a radioactive emanation, that may account for it. In the complete, subterranean darkness of the Shell, it was still visible. But it had somehow become too weak to kill.

And, from the way Allurova hung on Don's arm as they went on board the yacht, I know she didn't regret that it had.

COMING NEXT MONTH:

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by

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You'll laugh—wonder—THINK.

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Breath of the Comet

by A. ROWLEY HILLIARD

*A story of Astronomical Calculations so Delicate
that only One Man on a Hemisphere knew!*

SURROUNDED BY a gaping, buzzing crowd, stood a man, haggard and worn. With an effort, he spoke.

"My friends," he groaned. "I don't know why I speak to you, because it is too late. I can only pity you, and hope——"

A roar of laughter interrupted him. He waited patiently until it had subsided; then he continued in the same sorrowful voice:

"I can only hope that I was wrong in my calculations—that you shall not perish."

"Nice of him, ain't it?" said a man in the crowd; and the merriment

burst out anew, mingled with jeers and hisses.

"Tell us about your contraption again," urged their self-appointed spokesman. "We forgot about it."

"That is not true," the man said wearily, "but I don't mind. What you see here is no more than a large model of the ordinary vacuum bottle. Inside the large tank, which you see, is suspended a smaller tank; and from the space between them the air has been removed. Thus the interior of the inner tank is rendered practically immune to all outside influences. It is within the inner tank that I shall be saved from destruc-

tion. There I have a supply of oxygen and food. There I shall remain for a period of two days."

"While we all get burned up, is that it?" put in a woman indignantly.

The crowd grinned expectantly. This was the part of the show it enjoyed most. The man passed his hand over his eyes.

"But, oh, what more could I do? For months I have tried in every way to warn the people of the United States. I have shouted from the street corners; I have advertised in the newspapers; I have spent every cent of the little money I possessed. I am ruined, discredited, the butt of every ignorant numskull who chooses to jeer at me."

His fists clenched, and he raised his head. "I hate you—the whole lot of you."

The slowly-rising murmur of the crowd became a roar as he finished speaking. From all directions they surged forward. The few policemen on hand struggled and shouted orders.

The man turned and flung open a huge, pluglike door in the end of the tank. Then he swung around.

"You would kill me, would you? Well, listen to me: I, and I alone, shall not die!"

He darted into the darkness within; and with a deep clang the heavy door swung to, and remained motionless.

HE WAS IN a place about ten feet long and barely high enough for him to stand erect. Across the bottom of the tank in which he stood, boards had been fitted to make a level footing. A storage battery and small globe on a shelf gave light. In one corner stood a small dry-ice chest; in another, an apparatus of tubes and valves which was the air-revitalizing machine. Across one

side lay a mattress with neatly folded bedclothes. It was upon this mattress that Professor Ludvig Hertz threw himself.

Slowly he regained his composure. He couldn't really blame them. Why should they believe what he, a great deal of the time, could not believe himself?

His mind traveled back to the time, less than a year ago, when the awful truth—or was it truth?—had come to him. Well, truth or not, it had ruined him. Then he had been a widely respected professor of astronomy in a great American university; now he was an object of pity and derision to the country which he had made his own—to most of the world, for that matter.

Yes, the world had reflected—although with less sympathy—the attitude of Dean Mitchell of the science department whose conversation with him remained graven in his memory; and would, he knew, until his dying day.

It had been almost midnight, that night, when he had burst into Dean Mitchell's study, disheveled, trembling, horrified.

"Why, Professor Hertz, what in the world is the matter?" Mitchell had asked in surprise.

"Oh, God, it is awful! My comet is about to—although I may be wrong; but I have checked my figures over and over, and I am sure I have made no mistake!"

"What is your comet about to do?" asked Mitchell with a twinkle in his eye. In scientific circles, the Hertz comet was sometimes taken seriously, sometimes not. There were those who claimed it to be no comet at all; in fact, nothing at all. And there were those who, admitting it to be a comet, still were in serious disagreement with its discoverer regarding its composition, orbit, and

characteristics in general. In fact, nobody agreed with Professor Hertz on every point, and there were those who did not agree with him on any.

"The Hertz comet," he almost shouted, "is about to destroy the Western Hemisphere!"

"What?"

"The nucleus will pass through our atmosphere on May 23rd, less than one year from to-day—less than a hundred miles from the Earth's surface!"

Mitchell, who had started up in astonishment, was now leaning back in his chair with a worried frown upon his face. For a few minutes he sat in silence, tapping his teeth gently with a pencil.

"Hertz," he said at last, "the semester is almost at an end. I am sure that it could be arranged so that you could start your vacation now. We have been working you pretty hard this year," he continued, with a sympathetic smile.

"Vacation? Working hard?" Hertz began in a dazed fashion. Then he understood, and went on indignantly: "You think I'm crazy! Good Lord, I almost wish I were. I wish I were!"

"Now look here, Hertz, you know as well as I do that for the last hundred years scientists have been agreed that no harm can come to the Earth from a comet."

Hertz leaned forward earnestly. "Dean Mitchell, you, a scientist yourself, know how dangerous it is to veto any specific proposition with a generalization such as that. They say that meteorites cannot harm the earth; yet if the great meteorite of 1908 had fallen in Berlin or London or New York City, instead of in the wastes of Siberia, the destruction would have been awful, and its victims would have been numbered in the millions."

"But meteorites are not comets," objected the other.

Hertz shook his head impatiently. "Of course meteorites are not comets. I was merely showing you that we cannot protect ourselves from cosmic destruction with vague, un-studied generalizations."

"You know, yourself," said Mitchell patiently, "that we are not trying to do that. Why, the very nature of comets renders them harmless to us. Their tenuosity—that is, their lack of density—makes it impossible for them to affect so dense a mass as the Earth, even though they may be many times larger. You know as well as I do that the Earth passed directly through the tail of the great comet of 1861, on June 30th of that year, without anything unusual happening. Therefore, why should—"

"Through the tail—yes, the tail!" groaned Hertz. "What is the tail? It is nothing; it is no more than a stream of light, or excitation of the ether. The Earth was two million miles from the nucleus—the great, roaring heart of the comet."

He paused a moment to collect himself, and then said: "My calculations show, beyond the shadow of a doubt, that the circular orbit of the Earth and the elliptical orbit of the Hertz comet coincide at a point in space, and that both the comet and the earth will reach that point together on May 23rd, 1935!"

MITCHELL REMAINED a while in silence. He seemed reluctant to speak. At last he said: "I do not want to hurt your feelings, professor; but of course, you know that considerable doubt has been expressed in astronomical circles as to whether an orbit can be assigned to the so-called Hertz comet. To do so it is necessary that the comet

be seen twice, and there is no definite proof—”

“Dean Mitchell,” interrupted the other, “sixty years ago, in Germany, my father discovered a comet. He studied it closely throughout the months during which it was visible, because it displayed certain unique features.”

He paused for a moment and then continued: “You are of course familiar with the fact that the stars are visible even through the nuclei of ordinary comets. What startled my father was the fact that the nucleus of his comet, when passing in front of a star—even one of the second magnitude—completely obscured it from view. He was forced to the conclusion that it was of a greater density than any ever before seen. This conclusion was supported by spectroscopic analysis of the comet’s rays. The course of the comet was also peculiar, and could be explained by no known influence—”

“There’s the point,” interrupted Mitchell. “It was obviously one of those stray comets which is no part of our solar system—which appears and disappears, never to be seen again.”

“My father did not think so. He believed it to be a ‘captured comet’—one that has come under the influence of some planet in our solar system. What that planet was, he could not say; he merely postulated its existence. On that basis he was able to predict that the comet would again appear in thirty years’ time.”

He paused; but Mitchell, who had decided to hear him out, remained silent.

“Never will I forget the day when the comet reappeared. I was scarcely twenty years of age. My father was elated—almost mad with joy. And then came the terrible

surprise and shock of learning that the scientific world—almost to a man—was arrayed against him. They ridiculed the idea of a comet whose actions they could not understand. They had not the imagination to see that there could be another planet in the solar system which they had never seen. Their disbelief broke my father’s heart. He died within a year.”

The man was silent.

Real sympathy showed in Mitchell’s face, as he replied: “That was tragic; and I am very sorry. I hope you will not think me crude when I repeat what has been so often said, that there was no reason to believe it to be the same comet. It is true that there were some points of resemblance between the two appearances, but by no possible stretch of the imagination could the same comet have appeared at that time. Such an orbit was impossible without inventing a new planet to explain it; and we cannot do that, you know. It would have been discovered by now.”

“It has been discovered,” said Hertz quietly.

“Has been discovered?” repeated the other in astonishment.

“It is the planet Pluto.”

Mitchell looked at him in stunned silence. Yes, certainly Hertz had been one of those who had predicted the discovery of the new planet—a discovery scarcely four years old, now.

“But if Pluto explains the orbit of the Hertz comet, why have you not proclaimed the fact before now?” he asked.

“I have been reconstructing my theory—or, rather, my father’s theory—in the light of the now definite location of the planet. I wanted to make it so convincing that there could be no more disbelief. I

have plotted the comet's orbit with absolute certainty.

"Not until the day before yesterday did I realize the awful consequences. I have not slept since," he said simply; and his white, haggard face testified to the fact.

Mitchell laughed uneasily. "It is impossible," he declared; and drew out his watch. "Hadn't we better be in bed?"

Hertz disregarded this. "Why is it impossible? Did not the comet of Biela intersect the Earth's orbit on October 29th, 1832? And was not the earth only thirty-two days' journey from the spot?"

"Yes, thirty-two days or about fifty million miles!" countered the other. "Has not somebody calculated that the chances against any such collision are two hundred and eighty million to one?"

Hertz shrugged impatiently. "That is Arago's wild and senseless guess. Suppose for a minute that he is accurate—that in any particular year the chances are just that. Has not our globe been revolving about the Sun and have not comets been shooting through space for twice two hundred and eighty million years and more? What, then, does Arago's calculation mean? It means that in any particular year the chances for the event are even, or better!"

UNBELIEF AND perplexity showed on Mitchell's face, but now he was deadly serious. "You said that the comet would destroy the Western Hemisphere. What did you mean by that?"

"Perhaps I should have said the northwestern. I cannot tell how far south the effect of the comet's passage will be deadly. But, as surely as I am sitting here, every living thing in the whole of the United

States and Canada will be withered and blasted—utterly annihilated!"

"Through what agency?"

"Heat, man, heat!" shouted Hertz. "Don't you see it? The terrific friction between the nucleus of the comet and the atmosphere of the Earth—both traveling at more than sixty thousand miles an hour—would alone do the damage. But there will be more than that. All the combustible matter of the comet—and hydrogen is surely there in great quantities—will burst into awful, scorching flames!"

"True, very true," murmured Mitchell, "if we admit the passage of the comet. But I don't admit that. How, for instance, can you be sure that it will pass over the Western Hemisphere? How can you know positively?"

"That is one of the simplest parts of the calculation. The comet will graze the earth on the side toward the Sun when it is daytime in the United States—somewhere between noon and three p. m., to be exact."

"But if it comes as close as you say, why will not the attraction of the Earth's mass cause it actually to collide with us?"

"For the same reason that any comet does not fall into the Sun—because of its tremendous velocity."

"But the attraction of the earth must change its course somewhat."

"Of course it does. Were it not for that, the comet would pass us at a distance of one hundred thousand miles. It is this attraction which I failed to reckon on until just recently. Otherwise I should have known sooner."

Mitchell sat silent. The exact and unfaltering answers of the other had seriously shaken his faith; but his mind refused to embrace Hertz's immense and terrible proposition. Instead, he was searching desperately

for flaws in the argument. Suddenly he returned to the attack.

"But what of the coma—the enormous envelope of gases at the head of the comet. If the nucleus itself came so near, would not the coma smother the whole earth?"

"I do not think so," replied Hertz slowly, after a pause. "The inhabitants of the rest of the earth should thank God that this comet is one of those—of which there are many, you know—that appear to have no comas. There will be gas, of course; but I do not think that its effects will be far-reaching. There will be tremendous winds and tides all over the Earth, but I think that the Eastern Hemisphere will survive—at least in part."

For perhaps a quarter of an hour, the two men sat in silence; Mitchell frowning and drawing aimless designs on his blotting pad before him, Hertz leaning over, running his hands through his hair. The excitable German was in a state of mental agony bordering on distraction; the practical American was considering probabilities, possibilities, causes, and effects. The trend of his thought was revealed in his next question:

"Will it be possible to check your calculations?"

The other replied without looking up. "Dean Mitchell, the Hertz comet has been my life study, as it was my father's before me. Do you for a moment imagine that any adequate check can be made in the bare seven months which remain before the catastrophe?"

"Of course not," said Mitchell quickly. Even as he had asked the question, he had realized its futility. Now he spoke with quiet emphasis:

"Inadequate checks will be made, however; and they will all contradict you."

Hertz looked up at him in wide-eyed astonishment. "Why should they contradict me?"

Mitchell raised both his hands in a gesture of irritation. "Good God, man! What do you expect will happen? Do you think that, on your word alone, the two hundred million inhabitants of the United States, Canada, and Mexico are going to pack up—bag and baggage—and migrate bodily to Europe, or wherever they can squeeze in?"

Hertz sank back in his chair, his face a mask of horror. "It means death to millions!" he whispered.

AND NOW, AS he lay upon his back in his strange iron prison—a pitiful wreck of the man he once had been—Hertz knew that Mitchell had been right. He had been subjected to the concentrated ridicule of a nation—the vicious ridicule that is born of fear.

For Professor Ludvig Hertz was, without question, a pitiful wreck, who mumbled incessantly to himself, whose hands shook weakly as he reached forward now to adjust a valve on his air machine.

He looked at his watch. Almost noon. He felt very weak. He had better eat something. Had to keep up his strength. Seating himself before the ice chest, using the top of it for a table, he partook of a very simple repast. Very simple and very short, for he quickly discovered that he was not hungry. Food did not appease that strange, powerful longing he felt.

Ludvig Hertz was lonely—lonely not so much for the companionship as for the sympathy of men. They had all been against him, would not listen to him, had merely laughed at him.

With the sound of that laughter ringing in his ears, he flushed and

muttered angrily. Laugh, would they? They only did it because they were afraid and could not help themselves. Mitchell had foretold it. But fear didn't justify cruelty.

Laugh, would they? Well, he would laugh last—and alone! For he was right, and they were wrong; and to be right meant to live, and to be wrong meant to die, and so it always had been. They that had jeered would die by the millions, struggling, gasping.

Something that was strong within Ludvig Hertz rose up to strangle thought, and he buried his face in his hands. He had been wishing it! Was he mad?

Mad! People had said so. Pallid and shaking, he rose to his feet, swayed dizzily for a moment, then crumpled down upon the bed. Why had he stayed in this awful place if he was sane? Why had he not gone to Europe with those few wise ones who had gone? He had told himself that scientific interest made him stay, but he could not deny that a strange and horrible fascination held him there.

Yes, they had said he was mad. Once they had detained and examined him. At the memory, anger drove out fear.

They had called him insane when he tried to save them. And as if that were not enough, they had denounced him from their pulpits as an enemy of God and man.

God! What of Him? Would God let them die? They were not bad people—could not be, so many of them. God was justice.

His head swam. To be good was to be right, was it not? Then they were right, and he was wrong. They were so many against one, and he an enemy of God.

And in his sick loneliness he wept bitterly.

Wrong! How easy it would be! Just one little slip! Many great scientists had said he was mistaken. They would not say so without reason. True, they could not check his calculations; but they knew things that he would never know, for they were greater than he.

What a fool he had been with his comet! A little shouting fool! And he would have to go out and face them—face a hilarious crowd that would surely be there, ready for the show. His whole soul was filled with dread of that cruel comedy to come—which must surely come, for he could not remain hidden forever. If they would beat him, kill him, he would thank them; but they would not.

They would laugh! That hateful laughter that thundered in his ears—that drove him mad!

Oh, if they would only die, those cruel, laughing millions! And as he feasted on that dream, his eyes shone, and he smiled.

He tossed upon his cot, his eyes gleaming strangely in the pasty whiteness of his face, his hands weakly clenching and unclenching at his sides. His mind was no longer clear. It was a tortuous, whirling tumult in which one single element of consciousness, one lone idea, fitfully flared.

That they should die in torture—the laugh burned from their lips! Then he would laugh.

And so Ludvig Hertz passed into unconsciousness—more of delirium than of sleep.

THE STRANGE IRON refuge of Professor Ludvig Hertz had been placed on the top of a rather large knoll to protect it from the tides, and had been firmly anchored by many cables to hold it against the winds. The iron surface had been

heavily coated with asbestos to preserve it against the heat. From its elevated position the ground sloped away in all directions, and it was possible to see for many miles.

To the east, far off, lay the sea; in the south, faintly visible, rose the tall spires and towers of New York City; at the west and north there stretched away the farm country, slightly rolling, sparsely wooded.

The pluglike door of the refuge was a hollow shell of iron—vacuum inside—which fitted closely into a circular passageway fused between the outer and inner tanks. It was fastened strongly on the inside with clamps.

Exactly forty-eight hours after it had closed, smoothly and slowly this door swung open; and far over the scorched and blackened earth there rang a laugh, wild, triumphant.

Far through the acrid barren air it rang, but no one heard it; for in this desolate waste nothing could hear or see or feel. And when it ceased, it left a deathly silence on the black earth under the red sky.

And Ludvig Hertz, breathing quickly, for the air was strangely unsatisfying and thin, surveyed a ruined world with joy.

He stooped to examine the earth. Yes; it was burned to a hard crust, as he had expected. And that hard crust stretched as far as he could see, over all the hills, making them smooth and black and beautiful.

But in many of the valleys lay water, weirdly reflecting the ruddy glow from above; and this, at first, he could not understand. Water! Slowly he turned east toward the sea.

Of course! The sea had done it—the tides. Had he not said so? There it lay, in the distance, red as blood. Above his head the sun shone crimson through an atmosphere

laden with the dust and ashes of the conflagration.

The man sighed ecstatically. He loved this beautiful world of red and black, where no one laughed but him. It was so smooth, except for here and there a pitiful stubble where woods had been, except for a few black lumps on the surface of the hill around him. Those lumps—what were they? Queer twisted things.

A shriek rent the heavy silence and ended in a mad babble of sound, as Hertz laughed again. They were men!

Animated by a horrible curiosity, he stumbled down the hill among them, muttering and chuckling to himself. No feeling of pity could now find place in his warped and broken mind. In its stead was a simple, gloating pleasure. They that had come to laugh at him and could not; but he could laugh at them, for he had been right. Right beyond the shadow of a doubt; right in every particular; right against the whole world. He was great! They would pay him tribute now! Yes—now they would realize!

They would pay him tribute—who? They were dead—burned to little black lumps. They that had called him fool did not know that he was great. They that had tortured him with laughter could not now hear his.

In a mad and futile anger he ran panting down the hill and out across the open country, searching for something that could hear him or speak to him. But in that infinite solitude nothing moved, and there was no sound.

The hot, sharp air was not good to breathe; he tired quickly, and sank down on the black earth, more lonely than he had ever been before. Was he, then, to die like this—

alone? No; surely some one would come, surely they would come from the other side of the world to find him. They knew he was there. Mitchell knew, and Mitchell had gone to Europe with the wise ones. He would come, even if—

But—but—

A terrifying thought: suppose they *could* not come! Perhaps they were helpless. Perhaps they, too, were dead. He tried to put the thought out of his mind, but it returned again and again with ever-increasing force until it assumed the proportions of truth. What madness to dream that the comet which wrought this destruction had not killed every living thing on earth! All except him. He alone lived; and soon he, too, would die, and no one would ever know how great he was.

In futile, childish rage, he beat the hard earth's crust with his fists and sobbed aloud.

ACCOMPANIED BY a low, faint hum, a speck appeared in the east. Slowly it grew, and the hum became a roar, as a great airship, its sides gleaming redly in the light of the sky, sank lower and lower toward the earth. Almost before it touched, men leaped out upon the ground.

"He should be somewhere not far from here," said Mitchell, "if he is alive."

"Which he isn't!" returned the captain shortly. "Why, great God, look at the place! It's—it's ghastly."

"Still, there is a small chance," persisted Mitchell. "He had prepared a place—"

"Look there!" exclaimed the captain suddenly, stretching out his arm.

Far out across the black surface, a man was running toward them,

frantically waving his arms above his head. Faintly, they heard his shouts.

"Thank God!" cried Mitchell, and started to run quickly over the scorched, black crust.

"He sure is glad to see us," said the captain at his side, "and I don't blame him!"

Others from the ship were following them, and by the time they reached Hertz they were a sizable crowd. He was gasping for breath and could only stare at them, an eager gleam in his eyes.

"Thank God you are alive!" cried Mitchell, grasping both his hands. "The world has suffered enough without losing you. I cannot begin too soon to praise you, as the rest of the world is praising you and your great mind. We are all—"

"I am great!" The man's voice was a hoarse croak. He wrenched his hands from Mitchell's and shook his fists above his head. "I am great, and the fools who laughed at me are dead. They are little black lumps all around us. They are little black lumps because they laughed at me. Now you shall hear me laugh at them!"

He threw back his head, and the air rang with peal upon peal of wild, demoniac laughter.

"Good God!" muttered the captain, and stopped.

Mitchell was speaking to him in a quick undertone. "We must get him away from here immediately," he said. "We shall have to start back without delay. Have some of your men carry him to the ship."

"Suits me!" the captain muttered. "I've seen more than I want to see here already."

Four men grasped Hertz who, in his weakness, could offer little resistance; and the whole party moved quickly toward the ship.

"When he is out of this awful place and among friends, he will be all right," said Mitchell.

"Let's hope so," said the captain, a bit dubiously.

They lifted him through the door of a cabin, and laid him on a daybed there. He did not appear to understand what was happening, but babbled ceaselessly to himself.

Within a quarter of an hour, the ship left the ground, and was rising swiftly—a thousand feet—two thousand—

Mitchell and the captain stood at a window, gazing with ever-increasing wonder at the strange, desolate world they were leaving. A sudden cry made them turn. The man had

leaped to his feet and was staring wildly about him.

"What are you doing?" he shouted. "Where are you taking me?" He stumbled to the door.

"You are taking me away from them—so I can't laugh at them!" he screamed. "You shall not. I laugh at you and them!"

"Quick!" yelled Mitchell; but the captain was too late, and together they gazed horrified into the black depths below, where a whirling thing of arms and legs dwindled to a speck and disappeared.

Away into the east sailed a great airship, leaving behind it a world where nothing lived.

Temperature by Radio

A RATHER startling development of radio, the successful operation of which seems to be "just around the corner," is the broadcasting of heat and refrigeration. It is possible, judging from what has already been accomplished, that future generations will be able to broadcast heat from the tropics and cold from the arctic. This would mean that needed temperatures, for human and crop comfort, could be picked up by properly attuned sets in any part of the world.

In one big laboratory heat is being radioed, but not on a practical basis. Engineers have taken motion pictures of a demonstration of heat radiation by "wireless" and under reasonably perfect control. The most convincing demonstration is that of the "sending" of heat from a distance and under such perfect control that it is used to pop corn in a paper bag without burning the bag. This accomplishment was one easily recorded by the cinema.

Radio broadcasting for high and low temperatures is not as difficult or as far removed from fact as the average person might imagine. It has been predicted that, in the not far-distant future, coal will be used only as a chemical product and will lose all value as a fuel. The actual value of coal may increase, however, due to newly discovered chemical uses.



It came at the first touch of the red grains—a sweeping line of fire!

UP TO NOW: James Blaine, chief engineer on the Metropole Bridge job, has witnessed the "destruction" of Portrero, an old enemy, and a mob of anarchists by a beam of mysterious, awful force. But later there comes a threat from this same Portrero—still alive!—and, by using the strange force, he destroys the Metropole Bridge and carries off Sylvia Brewster, daughter of the president of the construction company, and Gordon Van Dent, the

president's secretary. Blaine, sure that Sylvia is alive, deliberately invites the beam of force and is himself swept up into space by it. Portrero and Van Dent, he finds, await him in an upper world where matter, changed by cosmic energy, is invisible to eyes on the earth, a hundred miles below.

Blaine rescues Sylvia from Portrero's camp of anarchists, killing Gorsk, her jailer, and escaping with her on a huge tractorlike machine

Part Two—Concluding LAND of the LOST

by Charles Willard Diffin

used by Portrero for placing a string of big metal plates for a mile across the valley. Blaine knows that there is a deadly threat to earth in these metal plates.

With Sylvia and Oomba, a member of the giant, half-human race inhabiting this fantastic realm, Blaine reaches Oomba's village. The ungainly, flabby members of the tribe cluster around, talking excitedly in their clumsy tongue. Oomba calls for Kroa, apparently the one who has the most power among them. Kroa comes out, and Oomba speaks pleadingly to him for many minutes.

"How about my buying a stack of chips," Blaine says at last, "and sitting in on the game?"

VIII.

BLAINES FACED the big man calmly. "Are you Kroa?" he demanded. "Do you understand my language? If you do, then let's get out of this mob and go where we can talk. And as for Oomba, he's done nothing except bring us here to you."

He read some measure of comprehension in the slitted eyes. He fired other questions quickly.

"How big is this world? Are you people the only ones here? What about—"

Kroa, a gleam of triumph on his face, broke in abruptly. "The White Ones!" he exclaimed. "They live here, too. Big world, this! Kroa

'fraid of White Ones before Porth come. Porth damn smart man! Porth Kroa's friend! Kroa not 'fraid!"

His exultant mood changed; he stared at the two humans vindictively. "Porth's woman!" he stated, and pointed at Sylvia. "Oomba say so—you steal woman—Oomba help—Kroa take you back to Porth! Oomba no go back—Oomba go under Porth's block! You don't know? You look—see plenty fun!"

He growled an order. Before Blaine could protest, a dozen hands had dragged Oomba to the ground. Others, running clumsily, started toward the village.

Sounds came from the village. A copper framework with four slanting legs was being pushed noisily toward them, rolling on four wheels. At the top, ten feet above ground, was a thick block of gray metal. It was like the sliding block above the flywheel of their machine—like the metal in the big conical roof under which Portrero had waited—like the pavement of plates. What did it mean?—Blaine asked. What new threat was this? Then he ceased to question; he was too intent upon looking at a hole in the earth beneath the block, a hole black and deep in the solid rock.

And the marvel of it was that the black hole, the same size as the gray block above, moved as the block moved. It was always there, slipping smoothly along as the cumber-

some device was pushed forward. Behind it, where the hole had appeared to be, the rocks reappeared instantly and were the same as before.

Oomba's big figure had been lost among the scores of others as huge. Now, as the machine came to a stop, Blaine saw him. He was struggling in the grip of other flabby monsters who shoved him toward the machine, and who tried to push him under the block.

One of Oomba's hands came up as if to ward off that mysterious threat; the hand vanished as it went in under the mystic influence of the block. Oomba screamed once hoarsely—a hideous sound. He jerked backward. Blood was spurting from the stub of his arm—the hand and wrist were gone.

Blaine shouted at the top of his voice: "Stop it, you damn butchers!" Then two big hands seized him and lifted him bodily in the air. Kroa, grinning, threw him roughly back upon the platform, while Blaine's eyes, drawn irresistibly to the doomed, struggling man, saw all hope for Oomba ended.

One piercing scream rang high above the clamor of the blood-hungry crowd—it was Oomba's last call. His grotesquely writhing figure was thrust forward head-first; the great head with its shaggy, wild-flung hair went into that zone of death. The head vanished—then Oomba's body pitched limply forward and was lost from sight.

Hands tugged and pushed at the death-dealing machine and rolled it a short distance away. Blaine choked: "Good God! What does it mean?"

He was looking at blood-stained rocks that had reappeared where apparently a pit had been. On the rocks lay Oomba's body. Beside it,

sheared completely off, was the hand that had vanished; the head, severed, lay a foot or more away in a pool of its own blood.

The mob was milling wildly, shrieking with delight. Blaine glanced once at the tractor controls—they were hemmed in on all sides. He gently disengaged Sylvia's arms.

"It looks bad," he told her; "it sure does. I haven't helped you much by bringing you here." Then he lifted her to the ground and kept himself between her and Oomba's dismembered body as they followed where Kroa led.

They stopped before one building larger than the rest. At the entrance, stone images with leering human lips on beastly heads welcomed them ominously. Kroa motioned them to enter.

Inside, a single room was luminous with the eternal radiance that flooded through the stone walls as if they had been glass. More images—and a blood-stained altar, or a table for hideous feasting. Beyond these, startling in its terrific contrast, was a statue, white-robed, white of face, like a Greek god done in purest marble.

Beside them, Kroa uttered one startled exclamation that was almost a groan. Blaine, expecting only one last futile fight for life, swung about, but Kroa was groveling on the dirt floor. In the same instant, Blaine knew that the white statue had come abruptly to life—it had moved!

Kroa was moving. Strange sounds at first, then words: "The White Ones! It is the great god, Rama! But Porth said—" He stopped. Then he screamed once loudly: "Porth! Help Kroa, Porth!"

His wild cry died at the sound of a quiet voice. "Peace!" said the glistening statue. "Be still!"

In the silence came the rumbling of the death-dealing machine. It was passing the door; there were many of Kroa's followers to roll it. Until one, glancing in, saw the white figure, motionless and stern; then, with wild cries, they fled.

Blaine's eyes were on the white figure. For an instant the faintest trace of a smile curved the lips in the still, white face, a smile sad with understanding. "It is well," said the White One. "Let the instrument of death remain. Its work is not done."

Blaine suddenly found his voice. Kroa had spoken of another race; he had said there were the White Ones. A wild surge of newborn hope made Blaine cry out:

"Who are you? Are there people like you up here? Will you—"

One white hand waved him to silence. "I know," said the impassive white figure. "Man of the inner world, stranger from Oron, all that you can tell me I already know."

Through all his astonishment, Blaine suddenly was completely sure of the truth of those words. This mysterious one knew! Behind those calmly appraising eyes was vast knowledge. With equal suddenness, Blaine experienced a revulsion of feeling.

In a smothering wave of revolt against this mystery, his whole mind struck out against it all—this incredible sequence of events that had taken him from his own sure world and plunged him into a nightmare he could not understand. He shouted:

"For God's sake, Rama, whoever you are, get us out of this! Help us—"

The steady eyes had hardened in those moments as if the mysterious White One had overheard Blaine's every thought. They rested upon him sternly. "No!" he said.

Then he added, as if in explanation: "Know this, man of an infantile and ignorant race—man must succeed through his own failures; within himself is his only help."

Rama had refused—that much must have penetrated Kroa's dull mind. Kroa sprang to his feet, shouting: "Rama no help! Hell, no! White Ones no help! Rama Kroa's friend—Porth's friend—"

There was more, but Blaine had ceased to hear. For Kroa's big hands were tearing at the bared shoulders of Sylvia Brewster, and his clutching fingers were ripping the green dress to shreds.

BLAINE SHOULD have fought coolly; he should have kept his distance and sent his fists driving in without giving Kroa a chance to use his tremendous strength. But Blaine had ceased to reason; he was only a raging, maddened, fighting earth-man who threw himself upon the big figure of Kroa.

That first mad leap carried them reeling through the doorway. Sylvia screamed: "The block! Jimmy! You're going under—" But for Blaine there was nothing in the world but this great hulking beast thing that had its arms about him in a crushing grip. He tried vainly for the face—then Kroa had him by the throat.

Pain—a hundred times worse than before! But it served to tear the man from the madness that had seized him. Somehow, through the agony, he thought clearly. From somewhere within, reason flashed a clear call to his conscious mind.

"Low—hit low!" it was telling him. "The solar plexus! Now!"

The very grip that was torturing him gave him the needed leverage. He drove in his right again and again; he seemed to bury his fist in

the flabby body, and after pain-racked ages of time he felt the hands about his throat relax.

Beside him was the copper framework—it meant nothing to him. Nor the gray mass of metal above—nor Sylvia's repeated cries. He was remembering his fight with Gorski; he must not throw a straight right or left; he must come up from below. Then he felt the solid crash of his fist.

Kroa was falling. His body pitched heavily to one side. Blaine, staggering, caught the copper framework for support. He saw Kroa's head vanish in the deadly invisible zone—then the shoulders. The rest of the body fell limp, but for one final shudder that racked it. The body ended in emptiness where the invisible shadow seemed making a pit in the rocks.

But beyond the pit, a pool of red spread swiftly. It told with ghastly emphasis of the horror that was unseen.

IX.

BLAINE, STILL clinging to the framework, felt Sylvia's hand on his arm; the hand tightened convulsively.

"I thought you were lost," she whispered—her eyes were wide with horror of that moment that was past. "He tried to throw you under that horrible block! And I—I couldn't help you—that white thing was holding me!"

There was infinite scorn in the word as she used it. Rama, man of mystery, with the face and head of a master sculptor's dream, had drawn silently near. Sylvia turned on him in sudden fury.

"Coward!" she said. She did not raise her voice; its stinging contempt was all the more evident for the level coldness of her tone. "Be-

cause these savages call you a god, you would stand by and let one of them kill a *man!* A god!" she exclaimed. "We have other names for your kind on earth!"

The white face flushed dull-red, then the flush subsided. "A man," said the White One at last, "or a race of men—each must work out his own salvation."

He drew a slender pencil of silver from within his robe and turned toward the instrument of death. The pencil pointed once toward the gray block; for an instant its muzzle showed red. It was not fire; it seemed more as if the weapon had emitted a thin stream of dust. But in that instant the gray block vanished in a flash of blinding, dazzling heat.

The heat stabbed at Blaine's eyes—then he saw a cloud of blue haze drifting lazily away. The block was gone; only the coppery framework remained above the pool of blood and the severed body of Kroa. Kroa's head was suddenly visible, the sightless eyes staring upward as if in abrupt surprise.

Blaine spoke dryly. "Not entirely defenseless, were you? I could have used that little gun to good advantage a few minutes ago. But never mind that—it's information I want now."

He fired questions as if he were shooting them from an automatic: "Who are you? There's a whole race of you, I suppose. What place is this? We're lost—we've been snatched up off our own earth. So was Portrero's crowd. And that flying beast! It was a pterodactyl—it must have come up here ages ago!" Vainly he tried to fit these fragments of knowledge into a comprehensible whole.

"My Lord, man!" he gasped. "What's the answer? No sun—no

day or night—this radiant energy everywhere!" His torrent of words ended, not for want of further queries, but for lack of breath in his panting lungs.

Rama, of the White Ones, was not disturbed. He echoed evenly: "Energy—radiant energy everywhere. And its effects upon that other form of energy that you call matter is something which you, doubtless, would be unable to grasp."

His calm assumption of infinite superiority was maddening. Blaine's savage tone told plainly of his own tense nerves. "Listen to me—" he began.

He did not finish. Beside him, Sylvia was gasping breathlessly: "Jimmy! Look!" His eyes followed her trembling, pointing hand. He looked out and beyond the village of straggling stone huts to a high hill half a mile away.

Its entire crest was buried in the green of enormous trees whose great trunks shot hundreds of feet in air. From among those giant specimens of vegetable life, other monstrous shapes were leaping. They swarmed out over the open ground, their huge bodies glistening, black and shiny, in the golden light. Thick tails lashed the air as the monsters leaped ponderously.

Blaine swept Sylvia off her feet with one swing of his arm and held her ready for flight. He shouted to Rama: "The machine! The tractor! Quick—they're dinosaurs!"

The other man's calm white face checked him, though he hung poised for a quick dash. Rama said: "It is only the herd that returns. They are not saurians; they are mammals. The villagers find them useful."

Then Blaine saw black figures of men shoot suddenly into sight around the farther huts—Portrero and his men had traveled fast.

"Kroa!" Portrero was shouting. "Come here, Kroa, you big, fat-headed swine! I'll show you what to do with this—"

"Get your gun out, Rama!" Blaine ordered savagely. "You've got something to use it on now!"

No reply. He whirled sharply about. Before him was only the empty street and the blood-drenched body of Kroa. From occasional doorways in the stone huts, shaggy heads were thrust timidly. They were the only signs of life. Rama was gone, and only a slender pencil of silver on the colored rock marked where he had stood a fraction of a second before.

BLAINE SPRANG for the weapon, but Sylvia was quicker; her hand slipped in under his. "Right!" Blaine snapped. "Use it when the time comes!" But he was asking himself if Rama had left it intentionally—how did it work—could Sylvia manage it? Then he was again facing the oncoming men.

Portrero was in the lead; a dozen feet away he came to a sudden stop. Not because of Blaine, nor the weapon in Sylvia's hand—Portrero was gazing aghast at the head of Kroa and at the sightless, staring eyes.

Behind him was Van Dent, gasping in evident disbelief: "But you're dead, Blaine! That big flying thing got you!"

Blaine's eyes, flashing from face to face, took in all the varied expressions swiftly. A tough spot! But he had a chance. Portrero—Van Dent—the huddled group at their backs—there was uncertainty on every face. All but one. A red-haired man, younger than the rest, gazed steadily back at Blaine with appraising, inscrutable eyes.

"Bluff!" Blaine was telling him-

self silently. "Bet 'em as if you had 'em! That weapon of Rama's may not be worth a damn!" He smiled coolly at the men in front of him, then answered Van Dent:

"That's right, Van, but funny things can happen up here. One of them happened to Kroa. He got in my way. That's something for you and Port to think over."

"Why, you damn pup!" Portrero spat back vindictively. "Kroa could handle ten like you!"

"He didn't!" said Blaine.

Sylvia had moved to his side, drawing the torn frock about her shoulders under Van Dent's too-searching gaze. She whispered: "It won't work! I've tried. It's no use!" Still she held her head steadily high, though her face was pale.

Blaine took the slender silvery tube.

Bluff—the only chance left!

"Forget it, Port," he snapped, "and look into this! It's a ray gun—a disintegrator. Never mind where I got it. I've got it, and that's just too bad for you!"

He swung the weapon toward the empty framework where the gray metal of death had hung. "Had you noticed the block?" he asked. "Atomic disintegration—this little gun fixed that all up for you—just a puff of blue vapor, Port, and that was gone. You can't threaten your men with that any more."

Again the useless weapon swung back. "Do you want me to use it on you?" Blaine asked.

He was watching the men closely. In all but the red-headed man's eyes he saw the beginning of that fear which ignorance has for the unknown. But Portrero was laughing scornfully. Van Dent's roaring bass joined in.

"Ray projector!" Portrero scoffed. "Do you expect me to fall for that

stuff, you fool? Come on—" Abruptly his shout was lost in another shrill cry.

At the rear of the black cluster of men, one late arrival had hobbled to join them. He was an old man, stooped and gray-bearded; he was panting. He had failed to keep pace with the others in their pursuit, but now he threw himself forward between them and Blaine.

His thin voice shrieked: "It's gone! He's done it! He's destroyed the block!"

"A break," Blaine was praying; "all I need is a break!"

The stooped figure straightened. The old man stared at the empty framework, then back at Portrero.

"You scum!" he shrilled. "You've threatened us with it since the day you and Kroa got together. You killed little Saunders with it! You tore the head off MacGregor and left him to rot on the rocks!" He was shaking one palsied fist in the air; his voice had risen to a cracked scream.

Portrero moved quickly. More swiftly still, a red-haired figure tore loose from the mob at his back and leaped to the old man's side. The red-haired man pulled the feebly shaking fist down. He drawled: "You an' me both, Granpaw! Now pipe down before you bust an artery." Then he faced the sullen crew he had left.

"You bums," he told them, "can stick with Portrero if you want to. Me, I'm for this new guy. I don't know where he come from, but I've been lookin' him over. I think he's got guts. And me, I used to be a marine once myself."

Beside him, Blaine heard a stifled sob; Sylvia was clinging to his arm. She was saying in a trembling whisper: "Oh, dear God! Jimmy! Jimmy—you've won!"

But Blaine had eyes only for a thatch of red hair and a pair of heavy shoulders, one of which was settling almost imperceptibly. Again the red-haired man was speaking:

"And another thing—maybe this guy's bluffing with that little side arm of his, and again maybe he ain't. But him and me can take you bums apart with our bare hands and rip out all your works. And the first one I'd start on would be this louse here."

The sagging shoulder jerked up. One bone-hard fist lifted Portrero from his feet and sent him crashing back among his followers. Then the red-haired man was standing in front of Blaine. He was grinning broadly as he snapped into an easy salute.

"Sergeant O'Connell, cap'n," he said, "reportin' for duty. But you'd better put Granpaw here into the signal corps; Granpaw's a wow with a telescope. Believe it or not, he was peddlin' one at ten cents a look down in Central Park when we all got picked off the earth. Now keep that little gun of yours trained on these guys while we pull the old army game on that truck. Come on, Granpaw; we're goin' places."

X.

"GIMME THAT handle, cap'n." Sergeant O'Connell was speaking. Sylvia, with the old man, was seated on the platform of the crude tractor that had carried them before. Rama's weapon had held off the mob for the few minutes of their escape.

"This is the darnedest machine," the sergeant continued. "That Portrero guy must have built it up after I left. No"—this at an inquiring look from Blaine—"I didn't belong in that crowd. I come up with 'em,

but we didn't just seem to have the same ideas. I beat it, and, boy, have I traveled since then! I just got back in time to see the whole gang goin' hell bent after you folks, so I trailedd along to see what was doing.

"What happened? Well, all I know is that one minute we was all standing in Central Park, and I was listening to this Portrero guy shootin' off his mouth. Then, zowie!—a whole flock of ten-inch shells let go right under our feet, and the next thing the whole mess of us was rainin' down again, with a million tons of rocks and gravel tryin' to get down my neck. We come down in this god-awful place. The whole place was shaking with an earthquake. I saw the big split we come up through when it closed up."

O'Connell took time out to draw a breath, then added: "Say, do you know what I've been thinkin'? I've thought we were all dead. But, hell, that ain't reasonable any more! Miss Brewster, here, wouldn't never be ordered to report to the same place I was bound for. It's all too supernatural and spooky for me."

Blaine steadied himself against the wheel housing. The sergeant had been guiding their machine along a faintly marked road that led away from the village and the scene of Portrero's operations. Now he was cutting across the desolate rock desert toward the distant range of crystal mountains.

"Supernatural?" said Blaine. "You can forget that word, sergeant. There's nothing supernatural in the whole of creation; there are just a lot of things we don't understand. We're up here in this lost land. We're alive and real, though every atom of our bodies and of this whole place is a new form of matter. I know that much."

Blaine went on, talking more to

himself than to the sergeant. "The proton—that holds the secret—that's where practically all of the atom's mass is gathered. Now, here is all this radiant energy. When it broke through and struck on earth matter, it changed it; made it 'neo' matter—that's as good a term as any. The atom lost its weight, or most of it. Probably the earth repelled it. But the atom retained its integrity, and so did every object, including ourselves."

"I don't know what the hell you're talking about," said O'Connell good-naturedly, "but if you say this is real, that's O. K. with me. The question is—what next? You said this Portrero guy is aimin' to raise merry hell with our own earth. Why don't we go back with that little side arm of yours and knock the gang for a row of protons?"

"It won't work," said Blaine. Briefly he told O'Connell of the mysterious Rama. He was surprised to have the statement accepted with entire calmness. Then Blaine burst forth in desperation:

"I haven't got anything to work with. I can't stop him, and I've got to stop him! Here I am, running away!"

The sergeant stole one quick glance from the rough ground ahead; he looked at Blaine with undisguised admiration. "I thought you were bluffing them," he said. "I knew that wasn't a ray gun—I've seen the real ones—pick you off at a mile. But you played it swell, bettin' on a busted flush."

"Bluff!" exclaimed Blaine in disgust. "Turn around! Head back! You take care of Sylvia, and I'll go in there and get Port before the rest of them can finish me!"

"Listen, cap'n," said O'Connell soothingly, "you ain't through. You're just bettin' before the draw,

and I'm dealin', see? Sit tight. I told you I'd been travelin' around. Join the navy and see the world! Hell, you join up with this marine and I'll show you something!"

"No," Blaine protested, "you don't understand."

"Listen, cap'n," O'Connell repeated. "You know more in a minute than I do in a month. But there's folks up here that have forgot more than all of us ever knew. I've seen 'em—I've seen lots of things; but me, I'm too dumb; I don't know what it's all about."

"You mean—you mean—" Blaine was stammering with the sudden kindling of hope in his hopeless mind.

"Wait till I deal 'em," said O'Connell; "wait till we get over them mountains—then bet your head off!"

Nor would he say more, except: "You'd just call me a low-down, lyin' marine. Wait!"

Later, in the foothills of the crystal mountains, where a little stream splashed invitingly down through a canyon filled shoulder-high with broad-leaved plants, the sergeant drove their machine into hiding among tall trees.

"Now what?" asked Blaine.

"Now," said O'Connell emphatically, "we climb like hell."

Blaine caught Sylvia's twinkling glance. "All right," he said, "we climb like hell—and then what? What's over the mountains?"

O'Connell was still enigmatic. "I haven't dealt you that card yet, cap'n." He turned to the old man.

"Granpaw," he advised, "you better not tackle the mountains; you better make camp right here. There's water for you, and the stems of them plants ain't hard to take—I lived on 'em for near a year."

Sylvia sprang lithely to the ground, but "Granpaw," who had an-

nounced his real name as Higgs, dragged his aching body from the platform that was never made for rough going. The sergeant vanished and reappeared a moment later with an armful of green stalks.

"Cow fodder," he said; "but it ain't bad, at that. Just swallow the juice."

Blaine felt an inflow of strength with the first mouthful. His tiredness melted out of him; he was filled with a new confidence that approached exhilaration.

"And I was about ready to quit!" he exclaimed. "Ready to lie down and go to sleep and not care if I never woke up."

O'Connell, through a mouthful of the green stuff, uttered an exclamation of surprise. "Sleep!" he said when he could speak clearly. "Say, do you know I'd plumb forgot all about sleeping. You say it's two years or better since that bust-up in Central Park—well, I ain't slept a wink in them two years. Ain't this the darnedest place?"

"It's a beautiful place—now," said Sylvia. The intoxication of freedom and of this new food was upon them all. Her laugh rang gayly among the trees as she added: "I would like to stay here forever."

O'Connell grinned, but stooped and made up a bundle of the green stalks for easy carrying. He picked it up and looked at Blaine. "Still in the game?" he asked.

And Blaine, in this new mood, smiled broadly back. "You can deal me one more card, sergeant," he said, "and make it good."

"It'll be good," said O'Connell. "Let's go!"

Granpaw Higgs held out a wrinkled hand to each in turn. He clung to Blaine's hand at the last. "If Portrero comes before you get back —" he suggested.

"He won't," Blaine assured him. "We've come hundreds of miles, and Portrero has other things to think of. We'll pick you up when we come back. And if we don't come back"—he shrugged his shoulders—"well—good luck!"

Sudden tears brimmed in Granpaw Higgs' old eyes, tears he would not want seen. Blaine turned away. Sylvia and the sergeant were waiting on the first slope.

THEY BEGAN the climb with the voluble sergeant's reminiscences to cheer them on. As the hours passed there was no breath to waste on words, and always the desolation of the mountain land bore down upon them with increasing heaviness. They followed no trail, but O'Connell led the way up and around great crags that seemed impossible to surmount—up, and always up. And at last, when it seemed to Blaine that they were caught up in a new nightmare that could never end, they came to the last of the crystal slopes.

Its crest was a saw-toothed ridge. Again O'Connell went on ahead. He did not speak, but only motioned them to follow where he found footing. He reached the top. Blaine, helping Sylvia up the slippery ascent, saw him stop and extend one pointing hand. Again the sergeant had found his voice.

"I didn't dare tell you the truth," he was shouting down to them. "But I couldn't ever make up a lie like that. There it is! Look at it!"

And Blaine, when he had gained the top, still holding Sylvia close, stood as rigid and unmoving a statue as Rama had been.

Look at it, the sergeant had commanded, and Jimmy Blaine, who had seen and helped to build magnificent structures, looked and looked as if

he could never hope to take in the whole of the glorious panorama.

Poured over all was the golden flood of radiance. It shone in jeweled splendor on a city at their feet—a city of heaped-up masses of masonry whose every surface was a gleaming facet that poured forth a reflected glory of rose, and pink, and opaline tints.

The broad sweep of a hundred miles and more was a carpet of green. Woodlands, in towering enormousness, went to toylike dimensions in the distance. And scattered across that green expanse were other cities of splendor, whose rioting glory of color brought a gasp almost of pain to the lips of the girl. And this land of inconceivable beauty spread out and off into the distance, to end they knew not where under the silence of that gold-drenched sky.

Tiny figures moved in the streets at the mountain's base, figures all in white. Blaine, when the breath came back to his lungs, gasped: "The White Ones—Rama's people!"

Conviction swept upon him. Here before him was the answer to all his questions. Intelligent people, and kindly, no doubt, they would make plain all the mysteries, give the answers to all his problems. And O'Connell had done this!

Blaine brought his hand down in a resounding blow on the sergeant's shoulders. "You darned old red-headed Moses!" he exulted. "You've sure brought us out of the wilderness!"

O'Connell grinned happily. "I've been called lots of things one time and another," he said, "but that's a new one. Say, ain't it some place?"

"And the people, sergeant? They'll help us?"

O'Connell's expression changed. He said: "The folks there—well,

that's something else again. You saw one of 'em. They're a pretty cold proposition."

Again he grinned; the sergeant was his loquacious self once more. "Say," he told them, "there's one dame down there that ain't made of marble. Lalla, she calls herself. She dresses all in blue because her old man don't rate so high; he's just some kind of an engineer—he puts up their buildings."

Sylvia's laughter echoed gayly from the crystal rocks. She slipped one slender hand into the grasp of James Blaine, engineer. "Horrible!" she said. "Low caste, absolutely! You should choose your companions more carefully, sergeant."

Blaine did not join in her laughter. Suddenly he was all eagerness for a closer view. Back there in that other land, that place of horror, Portrero was working and planning. What those plans were, Blaine could not know; that they were horrible and certain of success he could not doubt. Portrero, a madman, with superhuman powers placed in his hands, might at that very instant be turning terrible death loose in the world below. And down at the mountain's base, within sight, was help!

Blaine turned swiftly on his companions. "Listen!" he said tensely. "Get this! We'll be going back. You'll wait with old Higgs. I'll go back and clean up Port. But I've got to have a weapon—all I need is a weapon of some sort. I'm going down—get one—be right back—you wait here—"

The last was flung over his shoulder. Before either could reply, Blaine, afire with impatience, thrilled with this new certainty of success, turned and flung himself down the slope. He was light. He took the steep declivities in enor-

mous leaps. He was in mid-air when he heard O'Connell's cry, hoarse with fear:

"Come back! For God's sake, cap'n, come back!"

Still in that wild leap, still falling, he saw the crystal mountains flame out in blazing red. With it came something in mid-air, something invisible, solid as solid steel—a force that struck him, caught him as he fell, and hurled him backward with a hard thud against a sheer crystal wall.

The rock face was crimson and scarlet, dazzlingly brilliant in the red glare. Blaine was pinned against it, half stunned and breathless. He tried to move; tried vainly to scream a warning to the two he had left. He could neither move nor speak; he was paralyzed in every fiber of his body.

About him was only that blazing, dazzling glare, leaping like living flames from every rock. The air was filled with it. And then, as if from the heart of those cold flames, came laughter—triumphant, sardonic, cruel!

XI.

BLAINE WAS helpless, unable to turn his head, but he found himself pinned against the face of rock in a position where he could see the upper slope. Through the glow that set all the crystal mountains ablaze, a figure was coming—a man. He seemed like some denizen of the infernal regions as the red light enveloped him. Then Blaine made out the familiar visage of Sergeant O'Connell. Sylvia followed. They came slowly, seemingly hardly able to move.

O'Connell said to the girl: "He may be living!" Then he added: "God help me for a blunderin' fool! I forgot the signal—the bit of glass

Lalla gave me!" He rammed his hand into an inner pocket.

When his hand came out, it seemed filled with green fire; the glow of it blotched his face to sickly colors. He held the green signal aloft—waited—then, as suddenly as it had come, the red ray vanished. The green signal, too; O'Connell was holding in his hand only a colorless crystal. Blaine, released from the force that pinned him against the cliff, fell lightly to its base.

O'Connell and Sylvia made their way to him; Sylvia knelt at his side. "Alive!" O'Connell exclaimed. "They only turned it on me light-like. Can you get up, cap'n? Here, I'll give you a lift. I think they're comin' now!"

On the hill below were a dozen white figures. Metal gleamed in their hands. As they drew near, the muzzle of a shining tube swung upon the three earth folk. It was the last any of them remembered; sleep, black and dreamless, wrapped them about.

Ten seated figures, marble-white, on a platform of black jet—it was the first thing Blaine saw when he awoke. They might have been carved from stone as lifeless as the towering walls of the vast room in which he stood.

Blaine realized that Sylvia and O'Connell were beside him. Off at one side, the white guard who had captured them waited; the tubes of their projectors were upon their prisoners. Blaine turned his attention to the ten above them.

Still motionless, only their eyes giving evidence of life, they regarded Blaine coldly from dead-white, expressionless faces where he could read neither friendship nor hostility. He was suddenly resentful of that impersonal appraisal. Specimens! Bugs pinned to a

board! The silence was becoming unbearable.

"If you can understand our language"—his voice in the vast room made him flinch unconsciously, but he went on—"I would like to tell you—"

One white figure came to life; a raised hand checked all attempt at explanation. The White One rose to his feet.

"Man of Oron," he said in sonorous tones, "would you presume to instruct the counselors of the White Ones? Be silent! We are about to speak:

"You are from the inner world, the dark magnet, a place where life has not yet progressed beyond its lower forms of expression. Even your rudimentary science is still concerned with material laws; you have not yet learned the laws of mind which transcend those of matter and open the portals to that wider life of the universe of which you are ignorant."

He paused. In the calm, emotionless voice was something which checked the quick words on Blaine's lips. A bug on a pin—and the insect would have not the least knowledge of the mental processes of the biologist who studied it!

"Our messenger, Rama, has given us his report. It is not entirely unfavorable. Because of that you will be permitted to remain, but, being of a low order, you will assume the blue garments of our laboring class. An instructor has been appointed who will have you in his care. He has been taught your tongue. His daughter will instruct the woman in her duties to the State."

His words ended. Instantly the white counselors were gone. Blaine stared in amazement at the empty chairs. Rudimentary science! he was thinking. Laws of mind trans-

cending those of matter! And there had been people on earth who had done queer things—fakers, charlatans, they had been termed. Perhaps there was still much to learn.

O'Connell's voice broke in on his thoughts explosively. "Lalla! Now can you tie that! And her old man, too!"

Two blue-robed figures were advancing across the room, a young woman whose golden hair hung in startling contrast against the soft blue of her robe, and an older man, tall and fair-haired as the girl. The man began haltingly:

"Because my *serain*—my daughter—knew the Mistaire O'Connell, we have been given the honor—"

His accent was curiously unfamiliar, his pronunciation precise. But Blaine was intent only upon their faces—human, understandable faces. "Thank God, they're human!" he said. "They're real folks!" The confusion of blushes sweeping the pale but lovely face of the girl, Lalla, as the sergeant greeted her, brought final conviction.

The man was giving his name. There were odd vowel sounds and rolling r's which Blaine could not reproduce. "Garth," was as near as he could come to it. "I, Garth, an humble maker of buildings, a worker in stone and metals—"

Blaine took both the man's extended hands. He said: "I've been looking for you, Garth, for a hundred years, it seems, though it's been only a matter of hours. Stone and metal, you say; well, I do a little in that line myself. And I'm going to do a lot more. Give me a little of the power of these White Ones and I'll throw a monkey wrench into Portrero's plans that will—"

Quick fear filled Garth's face; his eyes were wide with unspoken fright. The men of the armed

guard, walking toward an exit, turned sharply. Blaine knew he had blundered.

"The knowledge of the White Ones," said Garth as he bowed humbly, "is not for us who wear the blue. Come, your robes are ready."

BLAINE'S CLOTHES had been taken from him, together with Rama's weapon. He had no watch, no way of measuring the units of time in this sunless world, though Garth pointed out the great revolving sphere that he called the *ergana*, mounted on a tower at the city's heart, and tried to explain their system.

He knew, however, that some days had passed when he walked with Garth on the pavement of a broad avenue that swept in a graceful curve among iridescent buildings. Leisurely figures in white moved past; others in golden robes of a lower governing class came and went. Blue-clad workers, hurrying along, never failed to step aside for the ones of a higher caste.

There was no chatter of voices; Blaine had long since learned that whatever interchange of ideas took place among these silent folk was done by direct transmission of thought.

"Only we who wear the blue use words," Garth had explained. "We have not yet learned. But the White Ones, they speak one with another at vast distances; they send even their bodies wherever they direct by the power of mind." Blaine had learned then something of the immensity of that land, wherein were many cities of the White Ones, and others beyond counting that were the homes of more humble men.

To Garth, tall and fair-haired, Blaine was "Jeemy." Garth had got the word from Sylvia. "I, Garth, am

a man of *Sinlao*," he told Blaine. "It is a beautiful land. Perhaps, Jeemy, you will return there with me when my work is done."

Now he moved humbly along the broad avenue, taking Blaine to see his final construction assignment. And Blaine followed his example when Garth stepped aside at the approach of any person in gold or white.

"When in Rome—" he said aloud, and laughed. But Garth whispered: "Silence! The White Ones meditate!"

Ahead, the broad pavement ended in an enormous sunken bowl where lavender stonework was embedded in the earth. Within it, massed men and women made a sea of flawless white. None moved. Blaine stopped to look.

No slightest sound broke the utter silence; then, softly above the hushed throng, stole a whisper of harmony—at the center of the bowl a white-robed figure was moving his hands among changing lights that shimmered and quivered in the air.

Blaine thrilled with strange ecstasy. Music, breathing, throbbing—the very stars seemed singing, while each atom of his body quivered and thrilled in unspeakable celestial accord. His mind was afire with emotions too deep for words. Then Garth was tugging at him.

"Come!" he entreated in an agonized whisper. "It is forbidden that we should see!"

Blaine followed in a daze, the words of the white counselor in his ears: "Laws of mind—portals to that wider life—of which you are ignorant."

"The work," Garth was whispering; "it is nearly complete. See, Jeemy; see!" He was pointing toward a maze of opalescent arches that sprang lightly into the air, to

meet at a common center where more of the gleaming material was wrought into a pendant mass.

Only a hundred yards from the bowl where the White Ones were gathered were hurrying figures, great canes, masses of masonry that were being fitted in place. Blaine almost heard their clamor; then knew that only silence and the strains of ethereal music were ringing in his ears.

Garth was hurrying him. "We cross the sound absorbers here," he explained. And in one step Blaine found himself plunged into a din of shouting voices and the ring of steel on stone.

Garth must have seen his bewilderment. He smiled as he indicated a single wire over which they had stepped. He explained: "The work is surrounded; there is a wall of blended vibrations above the pitch of sound. The sound waves are absorbed. But see—the last unit is being placed!"

An enormous carving of winged figures was being raised. Blaine, thinking unconsciously in earth measures of weight, was breathless with apprehension. Tons of weight; and a swinging crane had lowered a lighted bulb on the merest thread of line. The bulb touched the great carving and swung it smoothly in air.

"It can't lift it!" Blaine was telling himself. "And those arches—the wonder is that they hold themselves together. They can never support that additional weight!" He caught his breath suddenly. The lighted bulb had dimmed—the great carving was loose—light of a golden sky showed between it and the bulb.

He waited for the crash. He gazed incredulously as the great mass floated softly down and touched lightly.

Garth said apologetically: "That was careless. I am ashamed, Jeemy, that you should have seen." He shouted orders.

Blaine exclaimed: "Why didn't it crash, Garth? Good Lord, man, have you learned to set all the laws of physics aside? Doesn't gravitation work up here?"

"But it was—how would you say it?—irradiated!" Garth's voice held a note of surprise. He pointed to a gleaming tube near by mounted on a massive tripod. Its closed end was a glass sphere; there were strange coils and shining silvery surfaces inside. "How could the carving fall?" Garth asked.

He called an order in his own tongue to a blue figure on the arches' topmost point. The man seemed tiny where he stood high in the air. Blaine saw him step casually out into space at Garth's call. And, like the great carving, he, too, floated softly down.

"Every workman," Garth explained, "is irradiated to insure his own safety. And as to gravitation, which is only the magnetism of your own inner world, that is easily made less effective when atomic properties are changed."

"Wait!" begged Blaine hoarsely. His lips were suddenly dry and stiff; he spoke with difficulty for the visions that were flashing in swift succession before him. "Don't kid me, Garth! Give this to me straight. Can you treat matter—human bodies—to alter their apparent weight? But acceleration? Suppose they fell a great distance—"

Again the lighted globe had descended; the carving was swinging smoothly into place. Garth spoke complacently:

"Acceleration is also taken care of. The rate of descent is constant, since the irradiated body is falling

always in the field of universal energy." He waved his arm comprehensively toward the golden-glowing heavens.

He called another workman. "You are strong," he told Blaine, "but try to lift him."

Blaine put his hands under the workman's arms. He could not raise the man's body a fraction of an inch. "All right," he said; "now what does that mean?"

Garth waved the worker away and seated himself upon a block of stone. "The White Ones," he said humbly, "have devised it. I myself comprehend little, but that little I will tell you, Jeemy."

BLAINE STOOD tensely waiting. He was so eager, so desperately anxious for some word of instruction in the science of this world. Again Garth was speaking:

"I have been taught that conditions are different on your inner world, but surely you know that properties of matter can be altered. You must know, Jeemy, that the inner world, Oron, is a great magnet."

"Gravitation," said Blaine; "the earth's attraction."

"But Oron repels as well as attracts."

"I learned that when I got kicked off the earth. Yes, Garth, I'll say that it repels."

"And it is dark, that inner world."

"No, it is light. There's the light of sun and moon and stars."

"I have heard of them," said Garth gravely. "But we, up here, cannot see them. We see only our own glorious light filling the heavens. Do you see that on Oron, Jeemy?"

"No, not on Oron." Blaine came back to the thought uppermost in his mind. "But what about this irradiation process? What's the meaning of this change of weight?"

"Gravitation," said Garth slowly, as if he were translating his own thoughts, "positive and negative, attraction and repulsion. Oron has both. Were I a scientist like you, Jeemy, I could make it clear; but in my own way I will try.

"See—on Oron there is a man. And up here there is another man just like him, except that this man's body is no longer earth matter. The man on Oron is both attracted and repelled, but the attraction is greater, and the man knows nothing of that repelling force; he knows only that he is held on Oron. That difference or excess attraction you call gravitation."

Blaine nodded. "And the man up here?"

Garth reached to touch Blaine's arm. "You," he said, "are the man up here. You, too, feel the repulsion and attraction of Oron, but in different degree; the difference—the gravitation—is less. Here, ten *kines*—you call it a hundred miles, Jeemy—above the surface of Oron, your body is light. Why, I do not know; I only know that it is so, and that this has to do with the structure of what you call the atom."

"And the irradiation process?" Blaine persisted.

"Again it changes the properties of matter. Irradiated, your body becomes heavy, almost as heavy as the man on Oron. The repulsion of Oron is cut down; your body tries to fall swiftly. But, in addition, there is another change. There is a vibration within your body. It is tuned to the constant frequency of this universal energy." Again he waved his arms toward the glowing heavens—"Oron calls you—you fall—but so long as you are in this light, you fall slowly; your velocity is constant. But see my work that is feenish, Jeemy. Is it not good?"

Hardly conscious of what he said, Blaine spoke words of commendation for the magnificent structure that made lacy arches above another place of meditation for the White Ones. Then: "How long does it last—the effects of irradiation?"

"For one hundred revolutions of the *ergana*."

Blaine nodded approval of Garth's reply. The same nod was a silent greeting to Sylvia and Lalla and the ever-present sergeant, who were coming toward them.

"Isn't it marvelous, Jimmy?" Sylvia asked. "And Lalla has been telling me such wonderful things—"

"I've been hearing a few myself," Blaine agreed. He took Sylvia and the sergeant with his two hands and led them to a position before the projector. He said:

"This will be handy if we go back across the mountains; we might fall off a cliff. Shoot, Garth!"

Garth hung back. "But you are not going back, and I have not been ordered. If the White Ones saw me, or if one happened to tune in on my thoughts—"

Blaine saw his eyes dart a searching glance about the scene of operations where none but blue-clad figures were visible. Then Garth pressed a lever that closed a switch.

Sizzling sounds came from the glass sphere as Garth swung the instrument swiftly over them all. The prickling tremor that shot through Blaine was not unpleasant. But the sight of a white-robed figure that came suddenly through the sound-deadening zone brought a different reaction.

He made one apparently awkward stumble that took Sylvia and O'Connell with him from the projector's mouth. He stepped swiftly to Garth's side and waved violently toward the arches. One swinging hand

touched the lever of the hissing projector and switched it off.

Then, by sheer will power, he took control of his own mind. He forced himself to forget what had just happened lest the White One overhear his thoughts. He must give the approaching man something else to think of. He must focus the White One's attention on his own loud words.

"They're wrong, I tell you"—his tone was hostile and argumentative—"the design is all wrong—they'll come down at the first breath of wind. The wonder is that the dead load alone doesn't kick them a hundred ways at once—"

A cold voice interrupted: "Is Garth instructing the stranger, or is the man of Oron presuming to instruct us? He seems displeased with your work." The White One extended his hand as if to rest it on the projector bulb. Blaine turned on him abruptly and said:

"Don't tell me that is good construction. There isn't cross section enough in those arches. They will topple."

"Enough!" The extended hand swung to point at Blaine. "You are arrogant—insulting. I shall recommend that you be expelled from this land. You may find the country beyond the mountains more to your liking."

"And you, Garth; your work here is done. You will return to *Sinlao*. You will leave in twelve revolutions of the *ergana*. I came to give you the order. Go!"

Garth and Lalla bowed low; the three others did likewise. But the sergeant whispered in Blaine's ear as the White One strode away: "Cap'n, you're one son of a gun! But didn't you back that play a little too strong?"

Blaine answered only when the

White One was out of sight. "I had to," he said despondently; "he was just going to touch the hot end of that machine. He'd have known it had been on, and that would have been just too bad for Garth! But it's bad for us, too, sergeant—mighty bad! I haven't got what I came here for yet!"

XII.

IN A BARE room that would have been cheerless but for the golden radiance that filtered through the walls, Blaine paced back and forth. Sylvia was there, and O'Connell. Garth, too, and his daughter, were prepared for a final leave-taking.

"Blind!" Blaine exclaimed. "I've been blind! I should have got the answer before. I've been trying to find some way to knock out Port and his gang, and all the time it's the gray metal I should have been studying. Now he's got those plates—strings of them a mile long!"

O'Connell tried to explain. "He was goin' to build houses with them plates—that's what Port said."

Blaine said: "Houses! He's going to rip the city of New York in two! He'll cut a slash across Manhattan!"

"But, Jimmy," Sylvia protested, "that is such a wild idea. Oh, I know that almost anything seems possible, but—"

"Listen!" Blaine commanded, and stopped his restless walk to enumerate his conclusions. "This earth is here—an outer shell above and around the whole world. Does any one know it on earth? No! And all space is filled with this radiant energy. Is that known? No! All we get of it on our own earth is a faint trickle that percolates through this outer shell—a mere trace of cosmic energy.

"Picture the earth as it once was

—a mass of whirling gas. This radiant energy is beating upon it. It changes whatever it touches to neo matter—a new form of matter. As far as it penetrates that gas it changes it to neo matter and builds up this outer shell. Inside, the earth cools and contracts; it condenses to earth matter, the kind of stuff we know, because this shell is filtering out the rays. And neo matter is invisible—we never knew it was here.

"But—" began O'Connell.

Blaine silenced him. "Get that! Neo matter is invisible to people formed of earth matter; and earth matter is invisible to us up here. Down below, the sun's rays come through the shell; up here we never see them. We're made of neo matter—neoplasm—we see only this cosmic radiation.

"And this outer shell must have shrunk, too, and been ripped with earthquakes. When that happened, the cosmic rays would shoot through every crack, and whatever they hit would be transformed. That's what happened to Port. It was an accidental split in the shell that brought him up—O'Connell knows that. An earthquake cracked this open—the rays shot through—they cut that gash in the Park right down to bedrock."

The sergeant contradicted that. "There was rocks come up with us—loose rocks and dirt—about a thousand million tons of it!"

"But the bedrock held," said Blaine. "It didn't tear loose. Same with the steel in our bridge. Port let that ray through on purpose. He punched a few holes in this shell—got his locations—shot the ray on the Metropole. Even then the steel didn't tear lose, but it was weakened; the neo-matter steel couldn't stand the tensile stress! Then Port

set his big shield up over the Brewster Building, locating it by triangulation. Port's clever—I'll say that!"

"But, Jimmy," Sylvia persisted, "you said yourself that the gray metal merely cut off the radiation. Isn't that what the shield did?"

"Right!" Again Blaine checked his restless pacing and came to a stand before them. "And whatever is under that gray metal turns to earth matter, with its full earth weight, too.

"Remember the tractor. I had the secret of it right under my hand, and never knew it! Remember how the part of the wheel directly under the block was invisible? Why? Because it was earth matter, and we couldn't see it! And that part tried to fall—it did fall—but, being metal, it didn't tear itself apart. The front of the wheel just kept falling continuously, or the rear when we reversed the block.

"And poor old Oomba, under that other block! Kroa, too. We thought there was some new force that smashed them, but gravitation pulled them apart. A hand or a head, stuck under there, turned instantly to earth matter. Heavy—the pull of the earth tore it off—the flesh and blood of neo matter couldn't stand the strain as metal does."

Blaine's words had poured from him in almost a frenzy. It was all so clear. He had been looking for new power, new rays, and all the time the secret lay in this cosmic radiation and the change in matter that followed when that radiation struck or was blocked off.

O'Connell said: "I knew he was up to dirty work with that shield of his. But pokin' a hole in this outside world—that must have been a big order, even for Port."

"He did it!" Blaine exclaimed. "What a blind fool I was! I saw

his shield like a big roof. I saw how he had built it up with overlapping plates, thin at the outer edge, then thicker, cutting off more radiation, toward the top. Up there he had an adjustable aperture—plates sliding in on one another."

"O. K. on that!" said O'Connell. "Those sliding plates came together and made a big thick slab. Did that do it?"

"Exactly! That little block of Kroa's didn't punch a hole in the ground because it wasn't big enough across. The ground under it was invisible, but the earth matter didn't fall out. With a bigger area, where the ratio of cohesion surface to mass would be cut way down, it lets go. Port's done some clever engineering.

"He graduated the thickness of the big shield so that the metal underneath would support it; there was no definite line of cleavage. Then he cut off the side radiation. Down below that big slab, when he closed those top plates, was a tremendous weight of earth matter. It tore loose. It didn't fall straight down—hit the ocean, probably—it would fall a little to the east. Even two hundred miles increased diameter would start it that way, and winds at high altitudes would do the rest—" Suddenly he broke in on his own explanations. He turned to Garth.

"The plates!" he said. "Garth, isn't there some way to destroy that stuff? Rama did it—he shot something red!"

Garth did not reply. O'Connell, who had been listening with eyes and mouth open, spoke with wondering admiration:

"Cap'n, I don't know what you're talkin' about. But that earthquake stuff—you sure hit that right! I'll bet all those big lads come from

folks picked off the earth thousands of years ago. And them flyin' reptiles like the one that left you alone when you lay still—they do that, every time!—I'll bet they come from down below about then, too!"

O'Connell was elated with his own speculations. "Now take them little lizards you told about—I've heard of such things fallin'—and stones, too, rainin' down. I suppose an earthquake could bust a mess of this neo-matter stuff off from underneath and give it a kick that would send it shootin' down till it turned back to real earth stuff again. Same with the little crawlers. Cap'n, if you could just stick around here a while, you'd find some way to put the skids under Port. I'll bet—"

The door opened abruptly. A guard of white-robed men stood outside. One indicated Blaine and Sylvia with his ray projector. He said coldly:

"The man, O'Connell, goes to *Sinlao* with Garth. But this man, Blaine, and the woman with him, leave now! They return whence they came. They are outcasts! The council has so ordered. Come!"

DIRECTLY AHEAD of Sylvia and Blaine loomed the last and highest crystal ridge. It was the place where first they had glimpsed the land which had seemed brilliant with promise. Now Sylvia put her arms about the man beside her as they stopped for one final despondent look. The White Guard was gone, vanished in the instant of their turning. Sylvia's face was pale, but two spots of color burned in her cheeks.

"It isn't beautiful!" she declared vehemently, and stared as Blaine was doing at the sweeping miles of green and the jeweled cities nestling there. "It's terrible! It's cold, and

hard, and unfeeling! Only God knows what lies ahead. We're outcasts, lost forever in a horrible, lost land. But we'll have each other, Jimmy; we'll—we'll—"

Her attempt at bravery ended; her overflowing eyes splashed bright drops across her cheeks. She said chokingly: "I wish Lalla hadn't gone. She never said good-by."

Blaine did not look at her, but kept his face steadily averted, as if in a farewell gaze upon the land of the White Ones. Sylvia must not see the rigid set of his jaws by which he tried to stifle his own emotions; she must not know the hopelessness of his own heart. He disengaged her clinging arms and led her upward, nor looked back as they crossed the ridge. The land of the White Ones was gone from sight; the descent ahead was blurred before his eyes.

Beside him, Sylvia cried out suddenly. "Lalla!" and again: "Lalla!" He wondered at her tone of glad surprise—then he saw her coming, the girl of *Sinlao*, coming swiftly under the rugged shoulder of a shattered hill. Her blue robe fluttered bravely against the crystal colorings of the rocks; her hair was flung back in a flame of gold; she kept always on the mountain's hidden side.

She was crying without attempt at restraint as she threw herself into Sylvia's arms. Her first sobbing words were almost incoherent.

"Your own world! Lalla knows nothing of it—but it must be beautiful and kind, for you came from there! And Lalla loves you. Your world must not be harmed.

"Here!" She thrust a tiny black container into Blaine's hand; he almost let it fall for its unexpected weight in a world where all things were so nearly weightless. "It is for the gray metal, Jeemy. My fa-

ther, Garth, says that it destroys the gray metal when it touches—but it means death for the one who stands close!"

Again her arms were about Sylvia. "Remember," she said; "remember always that Lalla loves you! I shall be praying for you in the great temple at *Sinlao*." Then she fled swiftly, leaping from rock to distant rock like a wild, beautiful, hunted thing among the crystal crags.

But Blaine, gazing dubiously at the few coarse grains of red powder in the container he had opened, was seeing in his mind a continuous line of gray a mile in length—and he was expected to destroy it all with this—a few heavy grains that looked only like coarse sand.

XIII.

ACROSS a valley whose vivid green of vegetation made the expanse a gleaming emerald under a sky of softest gold lay a hideous gray scar. Straight as the cut of a surgeon's knife, it flayed the green valley with an ugly suggestion of something evil in this place of abundant life. But Portrero, his lean, saturnine face afire with anticipation, looked upon it with every evidence of delight.

He sighted along its length—a floor of gray metal plates fifty feet in width. They were of double thickness now that one long row had been placed directly upon another. Beside this, a third row had been partly raised from the ground. It stood like an inclined wall, slanting up and away from the others, each plate being supported by a brace.

Men and women of Kroa's tribe, huge, flabby figures, stood beside each brace, ready to tilt the great

plates higher and tip them over upon the other doubled row. The strange, dark man whom they feared must be obeyed; and, if he was amused by this childish game, why should they complain? They waited in stolid patience for the cry of *Roha! Roha terai!* When it came, they would join in this silly game; and after that they would go back again to their homes.

"Eight inches of it there!" Portrero was exclaiming as he motioned Van Dent, an unshaven and disheveled Van Dent, to draw back with him to a safe distance. His own men were stationed at intervals well back from the line to relay his call. As for the huge men and women close to the line of plates who would die more or less swiftly under a horrible eruption—

Portrero said: "And the next layer will make twelve. Ten inches does it; I used only ten in the top of my shield."

Van Dent, licking his lips, protested feebly: "What will this do? Haven't you raised hell enough? You've destroyed the Brewster Building."

"Getting cold feet again?" The insane light in Portrero's eyes played searchingly upon the bigger man. "Yes, I ripped the guts out of the Brewster Building. But I didn't get Brewster, did I? All right, then—

"I can only hit them this once. Can't get any more of these plates, now that Kroa's dead. The dirty savage never told me where he got the stuff. Damn him! I wish I had had the fun of killing him!"

He was lost in silent staring at the line of plates where the ungainly figures waited for his word. Slowly his eyes regained their fire.

"But I've got the shield left!" he exulted. "I'll spot it wherever I

want to and smash them one crack at a time! And then I'll find that brat of Brewster's and I'll put her under the shield—shut off this yellow light—send her back down to her old man! I'll get word to him so he can see her hit!

"And that goes for you, too, Van Dent, if you butt in. You know too damn much, anyway. These other fools think I'm going to make them rich—going to grab off all the gold in the Federal Reserve and send us all back with it nice and safe. But you didn't fall for that. You watch your step, Van Dent."

Even talking to the silent man at his side, Portrero's gaze had never left the plates. His voice dropped to a whisper; plainly, all was forgotten now but the mad delight the next moment would bring. He said:

"New York! It's waiting! And I'm here and the plates are ready! Three thicknesses—the ground will fall away—there'll be a split a mile long for these damned rays to shoot through! We're over Manhattan—over Wall Street—maybe the far end is over the river; I made it plenty long.

"New York! Streets! Buildings! Subways! Full of people! They don't know that I'm going to rip them all to hell and bring them shooting up through here—right now!"

He straightened to his full height. His lips opened. Still he waited for the sheer pleasure of withholding the blow—and in that silent minute there came the faintest clatter of a machine driven at reckless speed over rough ground.

A LINE OF GRAY like an ugly scar on the green valley's breast, and a wall of gray half raised in the air, ready to be toppled upon that other straight line! Blaine, clinging to

the steering lever that tried to tear itself from his hands, knew what that meant.

He had intended to stop at a safe distance, leaving Sylvia and Higgs with the machine. Now, at sight of that waiting wall and of the two men who stood apart, with still others ranged along, but in back of the line of gray, he discarded all plans. He knew only that he must not drive Sylvia into the cataclysm that would follow the fall of those plates.

At a safe distance he slammed the machine to a stop. He saw the big figure of Van Dent racing to intercept him as he threw himself from the machine and leaped forward alone.

He could not hear Portrero's exultant cry of "Get him! Bring him here! We'll give them theirs!" He knew only that he held in his hand a little container—that it was open and ready—and that he dared not hope for success. He would die under the volcanic eruption of earth matter and wreckage—he saw that clearly. Or, even if he won, death must be his reward. "It means death for the one who stands close!"

He had almost reached the thick metal floor when Van Dent was upon him. Blaine's irradiated body was heavy, yet the shock of that charging man was felt for an instant. Blaine knew that he was being whirled to the ground, that he must keep his hand tight over the open end of the little box, though Van Dent's fist was crashing into his face—and then every sensation went from him. Every thought! He knew only that the container had fallen from his grasp; that the red grains were in his clenched hand, and that the pain of their contact was like white-hot iron!

He reveled in it. It meant power—power! And he had doubted those

grains! He tore free and sprang to his feet. Again Van Dent grappled with him, but now there was no impact of a charging man to give him the advantage. Blaine's weight, through irradiation, was unassailable. Blaine had him in a one-armed grasp that no brute strength could loosen—he was forcing him backward toward the line of gray—

"Roha! Roha terai!" Portrero's voice screamed it. Rumbling giant throats echoed it like children at play.

"Roha terai! Roha! Roha!"

Van Dent was struggling in frenzy, shouting, fighting only to get free. "Let me go!" he screamed. "Blaine—for God's sake! It's the signal! Let me go, Blaine——"

"Roha! Roha terai!" The cry had gone the full length—a foolish game; the big ones would go home soon. A mile of glinting gray plates was rising smoothly in air—they were upright—they were falling! And Blaine, his ears deaf to the uproar, his mind filled with one thought—to reach that deadly gray line before the plates should fall—held the shrieking, struggling Van Dent and forced him back—back—until one tortured, fire-filled hand, reaching past, could drop a few grains of red—

He did not consciously release his hold on Van Dent; the withdrawal of his encircling arm that saved it from being burned to the bone was no well-planned move. Yet Van Dent's big body was between Blaine and the holocaust of flame.

It came at the first touch of the red grains—a blast of white fire that swept the gray line like a train of quick-burning powder. It spread to the plates that were crashing down; it ran with a speed like light toward that farther end of the gray scar. That it reached there too late was

evidenced by the trembling ground beneath Blaine's feet.

One instant while realization came that he was still alive. He saw Van Dent's body, that had shielded him, drop smoldering to the blasted earth. There were other bodies beyond, giant bodies. Through the blue haze, Blaine saw them as they toppled and fell. Then, at the end of that mile of haze, he saw a spouting torrent of water that threw itself high in the golden air.

It poured upward in a convulsive stream, while the sound of its splashing thunder drowned the cries of Portrero's men. It rose again in terrific spouting till the torrent fell back and tore at the ground as it swept the loose rocks and earth to fill the raw wound.

Blaine cried out: "It broke through! I wasn't in time!" Then once more the ground trembled, and, with the roar of grinding rock in his ears, he saw the distant chasm close. The edges of that knife cut in the shell of this outer world had come together again.

The river! Quick understanding came to him! This part over New York had never let go—the plates had burned as they fell! He stared through swimming eyes at the cloud of blue haze billowing high in the swirling air above solid, unshattered ground. The marvel of it overcame him. The quick action of the red grains—catalysis, of course!—all the gray metal needed was a catalytic agent, then the reaction went on of itself.

He saw the little cylinder where he had dropped it, and reached for it unthinkingly. A trace of red clung inside the container; he took the cap from his pocket and screwed it on. Only then he came to himself and remembered the machine.

He turned to go back. The trac-

tor was not where he had left it. He saw it instead careening wildly across the green fields.

Sylvia had not discarded the blue robe; a little, unmoving heap of color on the platform could mean only her motionless body! There were two who struggled—Higgs and another. One fell beside the heap of blue; the other sprang for the steering lever.

Blaine saw the machine swerve in the hands of a lean, dark figure that must be that of Portrero. He was heading away at full speed. Toward the vast desert rocks. Toward the place where Blaine had first found himself in this lost land. Toward the shield of gray metal that Blaine now knew could be an instrument of horrible death.

XIV.

PORTRERO'S men were drawn into a huddle. They made no move toward Blaine; a man who could turn solid metal to raging flames was no one to fool with. Neither did they follow Portrero in his wild flight. Only Blaine, driving his heavy body desperately after the vanishing machine, took up the pursuit. The clatter of the tractor went to silence; the machine grew small in the distance. Then he saw it stop.

He sprang to a high pile of crimson rocks to see what this meant. He saw a little point of blue on the desert floor. Sylvia must have fallen from the machine. Through the clear air he saw the figure of Portrero, tiny and black in the distance, as he left the machine and raced back. He was picking up the helpless dot of blue—and then Blaine, shouting, leaped to the ground and took up the chase, but he yelled as if the distant figure of old Higgs could hear:

"Granpaw! God bless your old

heart!" But even if his voice could have carried, Granpaw Higgs could not have heard. Higgs had crawled forward, thrust once on the control, then had fallen back to the platform, while the unguided machine gathered speed and dashed wildly off over a smooth rocky floor.

The gray shield, seen edge-on as Blaine came within sight, made a thin line of black in the distance. Portrero, carrying a bundle of blue, was running toward it. The shield became a horrible and definite threat as he drew near.

All about it the ground was littered with fragments of masonry. Bricks, stones, terra cotta—great heaps of wreckage—had come since last he was here. It must have poured up through the open shield and rained back in a torrent of débris. Blaine knew what it meant—the Brewster Building had been destroyed; Portrero had not been idle while he was away.

Wildly his eyes searched for a trace of blue. There was only the great sheltering shield on its wide-spreading legs holding it clear of the ground on the downhill side. Beneath it was the pit and the darkness of the central housing. And silence—golden silence—over all.

Only when he was close did Blaine see motion. The silence was shattered by the harsh scraping of metal on metal. The top of the shield was moving. The sliding plates were being drawn in.

No thought of the stairs. Blaine launched himself into the pit while he cursed the smooth slowness with which he fell. Then he bounded up the other stairway to the upper part of the tall central room. He tore open the door and hurled himself to the dark chamber within.

It was the same as that one glimpse had shown him before.

Metal walls. A telescope. From the open doorway, dim light from the pit came in, but in the roof was a brighter light—a brilliant bull's-eye that was closing—closing! And Portrero, working madly at a lever across the room, was screaming insane curses that revolved about the name of Brewster. Then Blaine saw the blue of Sylvia's robe.

She was on the floor in the center of the room, on a smooth sheet of metal that he knew was directly above the opening in this outer earth. Her eyes were closed; her face as pale as if death had already come. The brilliance from above made a bright disk of light on her body. The disk was shrinking!

Blaine's leap for Portrero changed in the instant of springing. He threw himself toward the body of Sylvia instead. He was beside her in the black shadow; the light from above was dim; sliding plates scraped harshly as they closed. He was numbed with cold—fearful, devastating cold. He was sodden and heavy. Sylvia's body was a dead weight in his hands. Yet somehow he threw her with all his strength, then leaped after as the dim glow overhead winked out.

Behind him was a sound as of ripping paper. Metal clanged loudly once—the ring of it was like a bell dropping swiftly away. Where the plate had been was only a black void. The metal that had held Sylvia's body was hurtling downward on its hundred-mile fall.

Even in the faint glow of the room outside that shadow of death, the cold knotted Blaine's muscles. He had time for only one step toward that little huddle of blue that was Sylvia, then Portrero, in one wild spring, landed astride the girl's body. He screamed hideously, insanely, once; then he was lifting her.

Blaine's tensed muscles tore loose from their paralyzed numbness, and he shot forward.

Portrero was ready. He had let the limp body fall. Blaine saw him in one flashing instant crouched above the blue figure like a beast of prey. And, like a beast, he snarled. His face was contorted; his black eyes, with lids drawn wide, glared from circles of white. Portrero was finally, irrevocably, insane! Blaine drove one glancing blow to that face—then he was locked in an embrace as if steel bands had closed about him.

Strength of a madman! Superhuman strength! Blaine might have been struggling in the jaws of one of his own great testing machines. He writhed and twisted—knew he was trampling upon a limp, yielding body—then Portrero drew him down. One of those gripping hands let go and whipped toward the floor; it held a bar of jagged metal when it came back. Portrero swung the bar up—then down.

No time to avoid the blow; but Blaine's right arm was free. With all the strength that was in him, and the weight of his irradiated body to give it force, he drove his fist up solidly under Portrero's jaw.

The two blows landed as one. Pain seared Blaine's head and shoulder; he staggered backward and fell. But always he saw Portrero.

Portrero lifted bodily in air! Portrero down! But the man came back to his feet as a great cat might have done, and the bar of steel was in his hands. Between him and Blaine was only a barrier of blue where Sylvia lay as if dead; Blaine, the whole left side of his body paralyzed by that blow, was unable to stand.

Bare metal walls echoed with a repetition of Portrero's scream as he rushed madly forward. For Blaine,

all but that twisted face seemed blotted out. He saw it as that last rush began—saw it coming toward him—saw it waver and sweep sidewise in a wide arc. Then the whole picture flashed clear.

Portrero was lurching sidewise in a whirling fall, his feet entangled in a snarl of blue cloth. He tried to catch himself; he tore his feet free. Then the scream that had begun in triumphant rage changed to an ear-piercing terror as Portrero, still stumbling, still clutching vainly in air, pitched forward into black shadow and vanished in the nothingness of the dark shaft that was a portal to a waiting world.

THE OPEN shaft was again a place of radiant gold when Blaine looked upon it a scant hour later. He worked at the lever until he learned how to open the big diaphragm above, where plates, two inches thick, made a solid ten inches of gray metal beneath which all neo matter must revert to earth form. The plates unfolded, and again the golden radiance poured through.

He had little place in his frenzied thoughts for contemplation of Portrero's cleverness. He had carried Sylvia out into the full radiance of the open world. A terrifyingly quiet burden; only an occasional fluttering breath showed that she still lived as Blaine stood looking down at her.

"I've got to do it, dear!" he told the inanimate form. "I've got to chance it! You will die up here—die!"

With startling abruptness the voice of Granpaw Higgs came to him. Blaine had not heard him drive up; now he saw him dismounting from the crude machine which had served them both well and ill. Higgs shouted:

"Got him, did you? Well, I hope you've got him safe. And there's Miss Sylvia—is she hurt bad?"

"Very!" said Blaine shortly. "And Portrero—yes, Portrero is safe!" The old man would have begun again, but Blaine cut him short. "Listen," he said.

"I've got to leave you, old-timer. I've got to get Sylvia back to earth—or I must try, at least. We'll both die in the trying, I imagine, but that will be better than this. Quick! Come with me!"

He raised the girl's body tenderly, then led the way into the pit and up into the upper room.

Again he interrupted the halting words of sympathy that came to Higgs' lips. He said: "There's the telescope. Get up on that platform. Look down through the telescope. Wait! I'll partly close the shield so you'll be under a layer or two of the metal. See if you can see anything down below."

He waited impatiently while the trembling fingers made tiny adjustments. "It's my own instrument," Higgs was saying; "I ought to know how to work it. Gosh, I feel cold in here! But, say, by cracky! I can see a city—there's a building all smashed to bits! But it looks all funny and ghostlylike. What's that blunderin' fool been doin' with this instrument?"

Blaine tried to explain. "It isn't the telescope; it's the light. You can't see earth matter from up here—couldn't see it at all if you were in the full light. But you're under the shield with only part of the radiation coming through. You're in a halfway stage between the two forms."

He felt that he must make the man understand—so much depended upon him—but suddenly his impatience got the better of him.

"Never mind that!" he said sharply. "You can see—that's the main thing—that's how Portrero did it! And there will be nothing coming up; the ray has been on, and it's picked off every loose stone and brick. Now, get this! Sylvia and I are going down. We may smash; we may never know another thing after we step off. But, if we get down safely, can you see us with that? Can you tell when we land?"

"Sure, but—" Old Higgs was openly incredulous. "You're goin' to jump? Is it as easy as that?"

"For heaven's sake, don't you try it. We've been irradiated—you haven't! We're heavy, but we'll fall slowly and steadily, I hope."

"I won't try it," Higgs promised. "And I won't much mind staying. I figger I'll take that old machine out there and go back where I went before. Then I'll climb over the mountains and find the sergeant, and—"

"Right!" said Blaine. "Now, I'm counting on you. Sylvia is dying up here. She took a bad fall off that machine—both arms broken—she may be injured internally. It's up to you, old-timer. No one is here to come near you. I saw Port's gang beating it off across country half an hour ago. But you'll freeze up there; you'll need to go out and get warmed up every little while, for we'll be hours—I don't know how long—going down.

"But when you see us land and see me wave, you're to pull on this lever that closes the shield. Is that plain?"

"Plain as plain!" said Granpaw Higgs.

"Right! Now get this, too! After that you're to destroy this shield so Portrero's crowd won't ever get it. You will take this little box with a couple of red grains in it and spill

them on top of the shield. But do it from a distance. Weave a rope out of grass and knock it over with that. Can we count on you?"

He did not wait for an answer, and his hand clung for only an instant to the trembling hand of Granpaw. He had found a long, flexible strip of metal among odds and ends about the room. Now he stooped and gently lifted Sylvia's bruised body and bound it to him with several wrappings of the metal strip.

Her arms hung awkwardly; he managed to kiss her once tenderly on her blood-stained forehead before he nestled her head on his shoulder. She was heavy; she would be weightless in an instant as together they fell.

The golden shaft was beside him. The flooding radiance of a strange, lost world poured down through the open shield, down through the shaft that a crazed man's genius had torn through the seeming solidness of the rock. Blaine forgot the man beside him—for got everything of earth or of worlds above the earth as he pressed his lips to the pitiful face held close against him.

He whispered: "We'll take it together, my dear—that's something." He was holding her close as he stepped firmly forward into the emptiness of the radiant beam. An instant later the smooth ease of the descent overwhelmed him as shockingly as if he had plunged headlong through an airless void.

THE WRECKED framework of a building seemed rising to meet him. The upward blast of transformed air, tearing at them as it ascended in the beam, had not checked their fall. "A uniform velocity," Garth had said. And now it was as if they were suspended in air while a phantom world came to them from below.

For hours there had been nothing visible, no sense of motion but for that unending, uprising blast of air, until now——”

Outside the ray was nothingness, but that void held hazy, phantom shapes below; it held a world, lighted to his eyes only by the trickle of cosmic energy that came through. But directly below them in the ray all was solid and substantial. Hanging girders—floor beams, whose loose ends lifted, tugging upward—a steel column, bent and twisted. And now he knew he was falling more swiftly than Garth's man had done in that other world.

He held his precious burden safe from contact with the twisted steel as they slipped swiftly past. A floor of riveted plates that had resisted the up-pull of the destroying radiance was below. With awkward contortions, he forced his body underneath that of the girl; he took the shock as they struck heavily upon the steel floor. For breathless, nerve-racking moments he lay, while his heart pounded loudly in his ears.

Silence was over them—silence that was overpowering. And beyond the circle of radiance was a ghostly city where moving figures, almost but not quite invisible, came and went—and, at last, he took his arms from about the girl, whose shallow breathing told that the flame of life still burned.

His fingers fumbled at the metal that bound them. Slowly, like one in a dream, he got to his feet; he stooped, and, with wooden, unfeeling hands, tore a broad strip from the girl's blue robe; he waved the blue cloth above him in the golden light—waved it and waved it until the light grew dim.

Then the light was gone. With its going, new light rushed in. Sunlight! The crash and clamor of city

sounds beat upon him from a world flashing instantly to full life under the blaze of a noonday sun.

For Blaine it was unheard and unseen. Meeting with seeming impossibilities, he had proved them true; he had learned to believe—now this other reality was too much to accept. He was talking to Sylvia as if she could hear as he stooped and again took her in his arms.

“I've been waiting—I've been waving to Granpaw, dear. I didn't dare step out of the ray while it was on—and we're not really here—I can't expect you to believe that—we are only——”

He had been moving slowly out from among the wreckage. With infinite labor, he raised himself to step up and out upon the level of the street. He was heavy—unbearably heavy—but he must hold Sylvia; he must hold fast to her forever through whatever dreams might come to torment them.

There were ready arms that caught him as he pitched helplessly forward. There was even a voice most curiously like that of Horatio Brewster that said something of “Sylvia! My little girl—my little girl!” And there were ears to listen as Blaine tried to shout before the enveloping blackness overwhelmed him utterly.

“Don't—go in—there!” he muttered feebly. “Don't—go in! It will be—coming on—again! Granpaw—Granpaw's going—going to—burn the big shield——”

There were those to hear and heed his warning, though they were sure he was delirious at the last.

“SHE WILL GET well,” Horatio Brewster was saying. “Sylvia will recover, Blaine, and that's all that counts.”

They were beside the ruins of the

Brewster Building. For a space on all sides, the streets were roped off; men in uniform were stationed at intervals to keep the curious from harm. But Blaine and Brewster were inside the lines. Blaine's head and shoulder were swathed in bandages.

"It has been terrible," Brewster went on. "The loss of life—the horrible mystery of it. And now the damnable thing has come back again!" He pointed toward the building, through the sagging skeleton of which was an invisible shaft. Every girder, every twisted fragment of steel, seemed cut off as it entered that zone.

Blaine looked long and earnestly at that empty shaft. He said slowly: "It isn't golden now, of course—but it would be if I stood in it."

"Golden!" Brewster exclaimed, and Blaine saw how that pointing hand that once had been so firm was trembling. "I'll say it's not golden! It has ruined me. The bridge—then

this! I am wiped out—bankrupt! But Sylvia—Sylvia!—nothing else matters!"

"Golden!" Blaine repeated, and altered the other's words. "I'll say it is golden! You own the land that it's striking on, don't you, Brewster?"

"I own it," said Brewster bitterly. "My creditors wouldn't take the accursed place as a gift!"

A little smile came to Blaine's drawn, tired face. "They will wish they had," he said quietly; "it's the most valuable piece of ground in the world. For there's energy there, Brewster—radiant energy—and negative gravitation that we never knew existed before. We'll experiment; we'll learn to harness it, you and I."

He took Brewster's arm and led him away. "But, as you say," he added, "all that doesn't matter. I must go; Sylvia's waiting. We need each other a lot, Sylvia and I. There's so much we must learn to forget—together."

Such well-known writers of super-science and fantasy fiction as Nat Schachner and Carl Jacobi contribute to the January issue of TOP-NOTCH magazine, now on the news-stands. Make it your other magazine and you will not be disappointed.

Let's Get Down to **BRASS TACKS**



AN OPEN FORUM OF CONTROVERSIAL OPINION

AS this issue of ASTOUNDING goes to press the last issue has been on the stands only twenty-four hours. We have not had time to get your reaction to the idea of the "thought-variant" stories. Last month's was the first.

This month we bring you "COLOSSUS," by Donald Wandrei, a conception so vast as to stagger the most vivid imagination.

If the earth is an electron, then our universe is an atom; and that pictured superworld is only an atom whose universe, in turn, is only a molecule! Project the idea and we reach into infinity. Can we perceive it?

Next month we offer one of the most astounding theses ever presented to superscience readers. With it we introduce a new writer (although his name has appeared in the nation's leading magazines) to this field.

He broaches a new subject for debate. How far can science reach? To what extent can it control the human race?

This is not a puny attempt to experiment with a few members of the race but something bigger and more grandiose in its scope.

"REBIRTH," by Thomas Calvert McClary, deals with a scientist's madness, to be sure—but it will make you wonder.

I know you'll like it. And I want your reactions in the Brass Tacks Forum, for such a plan as the story relates brings inevitably calamity and pestilence, death and catastrophe. Is it justified by the results?

We have undertaken to develop a magazine worthy of the best literary traditions in the new ASTOUNDING. We believe that you *must* have felt a steady improvement in the last four issues. Now, with our policy definitely taking shape; with writers recognizing us as the ONE steady, dependable market for new ideas, you may feel assured that every month will see ASTOUNDING STORIES more completely preëminent in its field.—The Editor.

Colossus

Since writing *Colossus*, I have come across a statement by the noted modern astrophysicist Jeans to the effect that life may be "a mere accidental and quite unimportant by-product of natural processes, which have some other and more stupendous end in view." This statement together with that by Eddington quoted at the head of the story might well have served as its themes.

Perhaps the most spectacular of man's achievements to date is his pushing outward of the bounds of the universe and the range of his imagination in the attempt to understand time, space, and matter. Expressed in purely mathematical terms, present knowledge of the universe may be summed up as follows: the solar system, separated by a void of four light-years from the nearest star, Alpha Centauri, is part of the Milky Way, a disk-shaped island universe consisting of several millions of stars. Hurtling away from this galaxy are other nebulae. Some 30,000,000 such star clusters are known, each comprising 1,000,000 or more stars. The diameter of the entire known universe is 200,000,000 light-years. In other words, expressed in miles, the diameter is 200,000,000x365x24x60x186,000.

Even these titanic figures are only estimates and theories. There is not a whit of proof that the Moon is 240,000 miles from Earth, and very little proof that light travels 186,000 miles per second. Light is the fastest thing known to man, but there may easily be all around him rays and radiations of such terrific velocity that they are undetectable by any instruments as yet known.

The point of interest is, what would happen if a solid could be projected into space at a speed in excess of that of light? Theoretically, such changes as described in *Colossus* would occur. The building of such a space ship as the *White Bird* lies well within the limits both of probability and possibility. Conquest of space is the next great adventure left now that the Earth is becoming thoroughly explored.

One of the most tantalizing of all concepts is the one on which *Colossus* is based: what would be found if one could go beyond the limits of the known universe? The best-known theories of space and matter are touched upon in the story, but I think the most appealing to the imagination, and also the most discon-

certing, is the concept employed: still more gigantic a cosmos of which our entire universe is only an atom, and which supercosmos itself is only the atom of a still vaster system of such scope and on such scale that the mind can hardly conceive of it.

Granting that a rational being like Duane could burst through, and with the profound physical metamorphoses that would attend a velocity far exceeding light, thus making him literally a colossus, and granting that he should discover rational beings to whom, huge as he was, he would still be only a speck of dust or an insect, the primary problem would then be one of communication. This, I believe, could be more readily accomplished than is generally thought possible. Solely through mathematical symbols, as used to some extent in the story, an entire system of communication could be rapidly developed.

It would be interesting to hear ASTOUNDING STORIES' readers' own theories about the universe, though I may add that merely thinking on such a vast subject is enough to drive one crazy!—Donald Wandrei.

World Flight

THE STEAM PLANE: A successful flight in a steam plane was reported by *Popular Science*, April, 1933. Of vast military significance because of its silence and its ability to sail in the stratosphere.

NEW SERUM: Report of the American Medical Association, Milwaukee, June 15, 1933: Doctor Clyde Brooks, of New Orleans, announced at the fourth session that his new compound, derived from ox blood, increases the size of animals far over the normal and that they live much longer. The same holds true of man, who will be, it is forecast, immunized to disease and shocks. Huge white rats built up. Foreshadows a radical, biological improvement of the human race.

RAISING THE DEAD: Report of Doctor Albert S. Hyman, Witkin Foundation, Beth Israel Hospital, New York. Doctor Hyman has brought back over one hundred people to life who were pronounced dead. They had been "dead" from three minutes to thirty minutes. The operation consists of warming the body, mild electrical shocks, and a needle with the proper solution introduced directly into the tissues of the heart. Many

of the "dead" brought back continued to live. Questioned by the doctor and clergymen of all the major faiths, the resurrected dead recalled nothing of any future life; there were no exceptions. Doctor Hyman's patients recover from "death" itself. The work goes on.—S. Gordon Gurwit.

We're Taking the "Correct Course"

Dear Editor:

Your second issue of ASTOUNDING STORIES gives me hope. Not just because of the stories in it, but because of the announcement of Nat Schachner's *Ancestral Voices*, to appear in the following issue. In the announcement you say—"slices through the most precious myths and legends of mankind—attacks a present-day wave of race-hysteria." Fine! That's the stuff! If Schachner's story, and others which I hope will follow, live up to your words, you'll be doing something that no one in your field has ever had the courage to do—or maybe they've just never thought of doing it.

Here's the science-fiction situation as I see it. There have been, and are now again, three magazines in the field. They represented, in the old days, two completely different viewpoints; the old ASTOUNDING on one side, the two competitors on the other. The old ASTOUNDING, frankly, stood in the main for plain, outright action-adventure stories, such as you may read in any ordinary magazine, but surrounded, to give them a tiny taste of newness, by mechanical gadgets, planets, world-menaces, horrible villains from interstellar space. The joker was that most of its authors, though they could think up these things and make them terribly blood-curdling, couldn't begin to explain them plausibly or indeed intelligently at all. It was all done for the thrill, the kick, the climax, and the happy ending. Deny it, you other readers, if you can.

Well, the two other magazines *could*—or made out as if they could—explain the machines and the invaders and the funny new diseases. Oh, they explained magnificently. In fact, they explained for pages and pages, and then put on a couple of more pages of footnotes, still doggedly explaining. But in the heat and stress of explanation, they forgot utterly that there is such a thing as literary art—believable characters—skill in the manner of unfolding a story and deft, color-

ful touches. In short, most of their stories were stupendously dry, and left you at the end in need of a good drink of water and a piece of peppermint. Or something better.

The answer? The correct course for a science-fiction magazine that sets out to cater to really intelligent readers? Isn't it obvious? No, not a direct course between the old ASTOUNDING and the other two—but something like it; in short, something like this:

Skill in the telling of the story. Smooth expression of ideas. Characters *right out of life*; not collar-ad heroes who act just so in a certain situation; not "villains" who open their flabby lips only to sneer and "curse obscenely." Original ideas that aren't afraid to challenge certain prejudices—as Schachner's story, apparently, will be challenging them. Stories that keep in step with the science of today; not stories that seize on scientific phenomena of space, time, and matter and explain those phenomena by putting a very nasty and evil-smelling "villain" behind them. Stories, I mean, that keep in accord with the pure spirit of modern research, that come boldly to whatever conclusions their themes lead them to and that don't step aside at the last minute, smirking, so that the hero can impress his cupid's bow lips on the fair brow of the shrinking heroine: I've had my fill of all that stuff and also of all the meandering, dully written explanations I mentioned before.

So, in conclusion, your announcement of *Ancestral Voices* gives me hope. You'll be doing something new; you'll be doing something that's long been needed; and you—and all the readers will join me in this prophecy, I know—will be rewarded! —Harold Collender, care of E. Rowen, 114 East Thirty-ninth Street, New York City.

Does Any One Disagree?

Dear Editor:

The November issue of ASTOUNDING STORIES is better than the October issue, but is still not up to what it used to be.

Telegraph Plateau, by Harl Vincent, is the best story in the issue. Mr. Vincent is one of my favorite science-fiction authors. *Dead Star Station* comes next in order of merit. Jack Williamson knows his stuff when it comes to writing science fiction. *Plane People, Beyond The Sphinxes' Cave and Prisms Of Space* fol-



Chesterfield—
I enjoy them a lot



...to me they're MILD
...to me they TASTE BETTER

They Satisfy

low in their respective orders. Of your weird tales, *My Lady of the Tunnel* is the best. I still think that you are making a mistake in using this type of story at all.

How about continuing the series about *Doctor Bird*, *Hawk Carse*, and *John Hanson*? They were well liked in the old ASTOUNDING.

Howard V. Brown is better than your other artists, but Wesso and Paul cannot be beat.

Have you any stories on hand by Edmond Hamilton, Captain S. P. Meek, Stanton A. Coblenz, and P. Schuyler Miller?—Jack Darrow, 4224 N. Sawyer Avenue, Chicago, Illinois.

By the Way, Bob—How's the Cover?

Dear Editor:

Well! Your second issue of ASTOUNDING STORIES is everything that the first issue wasn't! It sure is getting better, no mistake! And the cover was an astounding cover, a long way from that first one. How about a swell cover portraying a space ship—suitable for framing? And be sure you paint space black—not blue.

The stories were ninety-per-cent better, *Prisms Of Space* being the best short story, and *Telegraph Plateau* the best novelette.

How about a readers' department now? —Bob Tucker, P. O. Box 260, Bloomington, Illinois.

Any one Accept the Challenge?

Dear Editor:

Congratulations on the November issue of ASTOUNDING STORIES. There is still room for criticism—for a lot of criticism—but it represents a definite advance in quality over your first number.

I was particularly pleased to see the story *My Lady of the Tunnel*. At last, I thought after reading it, the editor of a science-fiction magazine has realized that his stories, even to fit into that classification, need not be confined to strange machines, world menaces, and so on. The human mind is just as much unexplored territory, just as much the proper material for science to work on, as the spiral nebulae of space; just as much the material, therefore, for the skill of an au-

thor. The implications and the overtones of *My Lady of the Tunnel* are significant; it is a story that can be read twice for its revelations of the murky innermost pits of a man's brain. Fantastic—yes; improbable—no; and on a level in quality with the most thoughtfully worked-out space story ever published. I wonder if your other readers agree? I'd like to meet one of them in a lusty debate in your Readers' Corner, if you ever start one—and I'll bet on myself!

To me, then, Burks' story was the most interesting in the issue. I put *Dead Star Station* next, because of its extraordinarily realistic feeling and its color, though the plot behind it is a respectable old gentleman when it comes to age. Next I liked *Telegraph Plateau*—a good, solid yarn—then *Beyond the Sphinxes' Cave*. *Prisms Of Space* was the type of story the old ASTOUNDING used to go in for heavily. I believe—I hope!—that you're getting away from it. If so, nothing can stop you.

But don't be afraid of quality! Don't think a story has to end up in just such a way! Get rid of all the old restrictions—give us stuff we can think over—fresh, new, vivid, striking original! —James G. Emmett, 607 East Fourteenth Street, New York City.

Thank You, It's Here Now!

Dear Editor:

Am writing to let you know how I liked the stories in the November issue. I rate them in the following order:

1. *Dead Star Station*.
2. *Telegraph Plateau*.
3. *Beyond The Sphinxes' Cave*.
4. *Plane People*.
5. *Prisms Of Space*.
6. *My Lady of the Tunnel*.
7. *The Man From Cincinnati*.
8. *In the Shadow of the Tii*.
9. *The Lovely Ghost*.

I repeat, as in the other letter I wrote to you, that I would like to see the illustrations and the inside drawing done exclusively by Wesso, as his drawings just suit this kind of stories. Another thing is the Readers' Corner in the back of the magazine. Couldn't you do that much for your readers? It puts a closer understanding between the editor and the readers.—Olon F. Wiggins, 2603 Curtis Street, Denver, Colorado.